

NAVY CHAPLAINS' UTILIZATION OF AUDIOVISUAL
RESOURCES IN RELIGIOUS PROGRAMS

A Dissertation
Presented to the
Graduate Faculty of the
School of Education
United States International University

In Partial Fulfillment
of the Requirements for the Degree of
Doctor of Education

by
George Armstead Langhorne, Jr.
San Diego, 1981

Abstract of Dissertation

NAVY CHAPLAINS' UTILIZATION OF AUDIOVISUAL
RESOURCES IN RELIGIOUS PROGRAMS

by

George Armstead Langhorne, Jr., Ph.D.

United States International University

Committee Chairperson: Lambert Baker, Ph.D.

THE PROBLEM. The purpose of the study was to determine U.S. Navy chaplains' utilization of audiovisual resources in the religious programs of the Navy. The Navy seeks to provide the resources which chaplains can use in the religious programs of the Navy. In order to provide adequate audiovisual resource support, the Navy needs to know what audiovisual resources chaplains want, which resources chaplains have competence in using, which resources chaplains consider important in their ministries, and what specialized training is needed to use the various resources.

METHOD. A descriptive survey approach was used to gather data pertinent to determining Navy chaplains' utilization of audiovisual resources. A researcher-designed questionnaire which consisted of knowledge of audiovisual resources, knowledge of availability of resources, competence in planning the use of audiovisual

resources, competence in using resources, importance of various audiovisual resources, need for training, open-ended question regarding suggestions to enhance the utilization of audiovisual resources, and demographic information was mailed to 321 randomly selected subjects.

Total responses on each questionnaire item were summarized by frequency, percentage, mean, and standard deviation. Total scores of each part were correlated for significance.

RESULTS. According to the responses, chaplains perceived themselves to be very knowledgeable of the various audiovisual resources and of the availability of the resources within the Navy. In general, Navy chaplains perceived themselves to be very competent in planning the use of and using the various resources. Navy chaplains also perceived themselves to need no training in using audiovisual resources. The responses also indicated that Navy chaplains considered 16mm films, 35mm slides, video tapes, filmstrips, and audio tapes as most important in their ministries, and the 8mm film projector was least important. The response also indicated that Navy chaplains want a wider selection of audiovisual resources, such as: dramatized scripture films and video tapes, and video tapes and films on biblical, ethical, and psychological/pastoral care topics and themes.

NAVY CHAPLAINS' UTILIZATION OF AUDIOVISUAL
RESOURCES IN RELIGIOUS PROGRAMS

A Dissertation
Presented to the
Graduate Faculty of the
School of Education
United States International University

In Partial Fulfillment
of the Requirements for the Degree of
Doctor of Education

by
George Armstead Langhorne, Jr.
San Diego, 1981



1982

GEORGE ARMSTEAD LANGHORNE, JR.

ALL RIGHTS RESERVED

NAVY CHAPLAINS' UTILIZATION OF AUDIOVISUAL
RESOURCES IN RELIGIOUS PROGRAMS

A Dissertation
Presented to the
Graduate Faculty of the
School of Education
United States International University

by
George Armstead Langhorne, Jr.

ACKNOWLEDGMENTS

I wish to express my appreciation to Dr. Lambert Baker, chairman of my dissertation committee, who provided expert counsel and encouragement, and Dr. Thomas Haines and Dr. Arthur Gumbrell, members of my advisory committee, who offered thoughtful suggestions and encouragement.

To engage in a study of this nature has required the helpful cooperation of many of my colleagues of the U.S. Navy Chaplain Corps. To the chaplains of Naval Surface Force Pacific who helped to develop the questionnaire as well as the many chaplains who responded to it, I wish to express my gratitude. I am especially indebted to Chaplain A. Wayne Riggs and Chaplain Jack Six who read the questionnaire and judged its content validity.

My sister-in-law, Debra L. Lewis, deserves special mention for her continuing interest and assistance in the study. She typed innumerable drafts with patience and forbearance.

Miss Kim Y. Brinson provided invaluable assistance with punching data into the computer. Marilyn Van Antwerp, a professional typist of accomplished skill, typed the final copy.

A special kind of appreciation is reserved for my wife, Joanne Lewis Langhorne. She typed and edited many drafts and offered untiring support and constant

encouragement. Without her patient cooperation the completion of this study would have been impossible.

TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	iv
LIST OF TABLES	ix
Chapter	
1. PROBLEM FORMULATION AND DEFINITIONS	1
Background of the Problem	3
Statement of the Problem	7
Purpose of the Study	8
Theoretical Assumptions	8
Importance of the Study	9
Scope of the Study	11
Definition of Terms	12
Organization of Remainder of Dissertation	13
2. REVIEW OF THE LITERATURE	14
Historical Overview of the Development of Audiovisual Resources	14
Philosophy and Purpose of Visual Education	19
Types of Audiovisual Resources	24
Use of Audiovisual Resources in Religious Programs	25
Summary	29
3. RESEARCH METHODS	31
Research Approach and Design	31
Subject Selection	32

Chapter	Page
Instrumentation	33
Validity and Reliability	35
Data Collection	35
Data Analysis	36
Methodological Assumptions and Limitations	38
4. RESEARCH FINDINGS	40
Demographic Profile of Chaplains	41
Findings According to Objectives	43
Objective 1	43
Objective 2	51
Objective 3	54
Objective 4	56
Objective 5	62
Objective 6	71
Additional Findings	73
Suggestions to Enhance Utilization of Audiovisual Resources	75
Software	75
Computers	76
Training	76
Hardware	77
Religious program specialist	77
Correlations with Chaplains' Knowledge of Audiovisual Resources	77
Correlations with Competency in Planning the Use of Audiovisual Resources	79

Chapter	Page
Correlations with Competency in Using Audiovisual Resources	79
Correlations of Competency in Using Resources with Need for Training in Resource	80
Summary	82
5. CONCLUSIONS, DISCUSSION AND IMPLICATIONS . .	85
Conclusions	86
Discussion	88
Implications	92
BIBLIOGRAPHY	96
APPENDICES	101
A. REQUEST FOR RESEARCH ON CHAPLAINS' UTILIZATION OF AUDIOVISUAL RESOURCES . . .	102
B. QUESTIONNAIRE	104
C. LETTER REGARDING SUGGESTIONS FOR STUDY . . .	110
D. COVER LETTER FOR QUESTIONNAIRE	112

LIST OF TABLES

Table	Page
1. Demographic Profile of Chaplains: Frequency and Percentage by Duty and Rank	42
2. Return Data: Frequency and Percentage by Rank of Captain	44
3. Chaplains' Knowledge of Audiovisual Resources: Frequency, Percentage, Mean, and Standard Deviation by Resource Item . .	45
4. Chaplains' Knowledge of Resources Available at Naval Education and Training Support Centers: Frequency, Percentage, Mean and Standard Deviation by Resource Item	52
5. Chaplains' Competency in Planning the Use of Resource Items: Frequency, Percentage, Mean and Standard Deviation by Resource . .	57
6. Chaplains' Competency in Using Audiovisual Resources (Software): Frequency, Percentage, Mean and Standard Deviation by Resource	60
7. Chaplains' Competency in Using Audiovisual Resources (Hardware): Frequency, Percentage, Mean and Standard Deviation by Resource	63
8. Items Chaplains Would Like to Use in Their Ministries: Frequency and Percentage by Resource	65
9. Audiovisual Resources in Order of Importance to Chaplains, by Rank: Frequency and Percentage by Resource Item	69
10. Audiovisual Resources in Overall Order of Importance to Chaplains: Frequency and Percentage by Resource Item	70

Table	Page
11. Chaplains' Need for Training: Frequency, Percentage, Mean, and Standard Deviation by Resource	74
12. Suggestions to Enhance Utilization of Audiovisual Resources: Frequency and Percentage by Category	75
13. Correlations with Total Score of Chaplains' Knowledge of Audiovisual Resources	78
14. Correlations with Competency in Planning Use of Audiovisual Resources	79
15. Correlations with Competency in Using Audiovisual Resources	80
16. Correlation of Chaplains' Competency in Using Resource with Need for Training in Resource	81

Chapter 1

PROBLEM FORMULATION AND DEFINITIONS

A major mission of the United States Navy is to prepare men and women for the many technical jobs and functions of the Navy. This training mission is further complicated by limitations. There are limitations on the number of military instructors available to accomplish the mission; there are limited numbers of qualified trainees. There are less time and training personnel to prepare more persons for a technologically advanced and expanding Navy. The Navy has tried to meet this expanding training mission by

- (1) providing instructors with aids--motion pictures, television, charts or specified teaching methods--which will improve his functioning; and
- (2) reduce or eliminate the need for an instructor by the more complete use of these aids, with the addition of such recent devices as automated textbooks or teaching machines (Kanner, 1960:117).

The use of audiovisual materials has greatly increased the speed and effectiveness of training in the Navy. Audio visual materials can promote the most effective kind of learning faster in adults as well as children (Dale, 1954; Waldrup, 1949). Research studies have shown that audiovisual materials make learning faster, more permanent, and more enjoyable by complementing and enriching other teaching methods (Waldrup, 1949).

In their efforts to improve the effectiveness of their ministries, U.S. Navy chaplains have begun using audiovisual resources in religious programming (Oddie, 1974). The use of audiovisual resources in religious programs facilitates understanding, growth and change of the participants. Audiovisual resources have many functional uses in religious programs. Audiovisual resources can be used effectively in the following program categories of religious life: worship, study, fellowship, leadership training, and social action (Tower, 1950). A major mission of U.S. Navy chaplains is to promote the moral, corporate, religious, spiritual and personal well-being of Navy members, their dependents, and other authorized persons by providing appropriate ministries. Appropriate ministries of U.S. Navy chaplains include worship, religious instruction, fellowship, social action, and counseling. Chaplains need ways to minister to many effectively. Audiovisual resources provide chaplains with effective diversity in their ministries.

Film is a significant tool for teaching, a powerful weapon in the battle for men's loyalties, a dynamic device through which persons can move beyond the printed or spoken word to touch unknown persons and new ideas--to experience truth (U.S. Air Force, 1980:C).

Audiovisual resources consist of more than films and filmstrips; included are records, slides, posters, buttons, television programs, stickers, banners, and tapes (Oddie, 1974). This study was concerned with Navy

chaplains' utilization of such audiovisual resources in Navy chapel programs.

Background of the Problem

In its attempt to meet the extensive teaching demands caused by the personnel buildup during World War II, the Navy found that "the use of the films materially increased the effectiveness of instruction" (Wood and Freeman, 1929:191). The Navy found that the use of audiovisual resources, especially films, greatly enhances teaching. The Navy can teach more skills, as well as influence attitudes toward the enemy and the war effort in general by using motion pictures in military training (Kanner, 1960). The use of audiovisual resources was so effective during World War II that "the immediate postwar years saw a large-scale investment by the Armed Forces in film research" (Kanner, 1960:122).

In the Catalog of Training Films for the United States Navy and Marine Corps, the U.S. Navy (1946:2) stated:

Film libraries have been established in every Naval District, at various air stations and centers, and at selected locations outside continental United States to furnish all training films required by the Navy and Marine Corps, including both forces afloat and ashore.

The Navy is convinced that audiovisual resources enhances the training mission. Audiovisual resources when used as an integral part of the course of instruction should:

(1) result in more learning by the men; (2) help them remember longer what they have learned; (3) increase their interest in things being taught; (4) help make training more uniform; (5) give trainees greater confidence in their ability to do their job, thereby improving morals; and (6) result in an overall saving of time (U.S. Navy, 1945:3).

In 1974, under the cognizance of the Chief of Naval Education and Training (CNET), the Naval district film libraries were closed and two Naval Education and Training Support Centers were established. The Naval Education and Training Support Center Pacific (NAVEDTRASUPPCENPAC) was established in San Diego, California, and it supports all naval commands west of the Mississippi to and including the Indian Ocean. The Naval Education and Training Support Center Atlantic (NAVEDTRASUPPCENLANT), located in Norfolk, Virginia, supports all naval commands east of the Mississippi to and including Europe and the Mediterranean Sea area (U.S. Navy, 1980). The training support centers primarily support naval commands with software such as films, filmstrips, videotapes, slides, and sound tracks. Each command has its own hardware or equipment for use.

Navy chaplains have been utilizing the audiovisual resources available through the Naval Education and Training Support Centers in chapel and religious programs. In the worship ministry, films, slides, posters, banners, paintings, and filmstrips have been used to augment and reinforce the sermon. Chaplains have successfully integrated videotapes, recordings, films, filmstrips, drawings

and overlays into the curriculum of the instructional ministry. "Audiovisual resources have peculiar capacities that fit them for particular teaching purposes" (Tower, 1950:93). Films, filmstrips, slides and videotapes facilitate religious growth and development when shared in the fellowship ministry. Navy chaplains have used films, tracts, slides, filmstrips, recordings, tapes and videotapes in their social action and counseling ministries. The concern of religious education is with the total response of whole persons to a saving relationship with God in the fellowship of the religious community. "In attempting to respond to this concern, the church has developed a system of education that permeates its entire life" (Case, 1960:259). The diversified ministries of Navy chaplains reflect the diversity of the Navy's religious community. Audiovisual resources have been helpful in all ministries when carefully integrated into total religious programs. Chaplains use richer and more interesting material and increase the general effectiveness of their work by using audiovisual materials and methods in their teaching and preaching (Hockman, 1947).

The use of audiovisual resources has to be well planned and requires a great deal of time and effort. The time and effort can help to make an instructor a more effective communicator (Curl, 1972). Technological devices such as audiovisual resources are designed to assist in the teaching-learning process (Curl, 1972; Wiman, 1969).

Mary Beattie Brady, director of the Harmon Foundation during the thirties, insisted that the films must not be expected to do the whole job of teaching or preaching; that for its most effective use it must be carefully integrated with the service of worship, the sermon, or the curriculum, and that the individual film or slide set is not so important as the way it is used (Rogers and Vieth, 1946:13).

Bowman et al. (1974) and Bachman (1960) advocated the use of audiovisual resources in religious programs. The use of such resources involves multisensory perceptions and has a greater impact on communication. However, instruction and training in the use of audiovisual resources for Navy chaplains is negligible. Each chaplain receives approximately 24 hours of instruction in media during the basic course. It is not known whether this training provides chaplains with adequate knowledge of audiovisual resources available in the Navy or with competence in using audiovisual resources.

Perhaps chaplains are not aware of the audiovisual resources at their disposal. They may have no knowledge of the resource, its capability or function (Reynolds, 1972). Reynolds noted that too often hardware and software are ordered without having first considered what function they will serve. Usually those who purchase the equipment have not consulted with those who will use it. It is possible that the Naval Education and Training Support Centers do not have the audiovisual resources chaplains would like to use in their ministries. Such lack of available resources could adversely affect religious programs. Chaplains would

either seek the resources from other sources or delete some programs. To date, there is no research to determine what resources chaplains want to utilize in their ministries. The Chief of Naval Education and Training has requested research on chaplains' utilization of audiovisual products (see Appendix A).

Statement of the Problem

The U.S. Navy needs to provide chaplains with adequate audiovisual resource support to ensure the moral and spiritual development of Navy personnel and their dependents. The Navy needs to provide audiovisual resource support through the most efficient and cost-effective system possible. There is a need to evaluate the system for effectiveness. The Navy needs to know what audiovisual products chaplains want to provide effective ministries. Chaplains need knowledge of the various audiovisual resources. Chaplains need competence in planning the use of audiovisual resources. Chaplains need competence in using audiovisual resources. Those who receive specialized training are more likely to use audiovisual resources than their untrained colleagues (Godfrey, 1967). There is a need for research on the utilization of audiovisual resources in Navy chapel and religious programs.

Purpose of the Study

The purpose of this study was to determine Navy chaplains' utilization of audiovisual resources in the religious programs of the Navy. The objectives of the study were:

1. to determine Navy chaplains' knowledge of audiovisual resources,
2. to determine Navy chaplains' knowledge of the various audiovisual resources available through the Naval Education and Training Support Centers,
3. to determine Navy chaplains' level of competence in planning the use of audiovisual resources,
4. to determine Navy chaplains' level of competence in using audiovisual resources,
5. to determine the importance of various audiovisual resources to Navy chaplains, and
6. to determine Navy chaplains' perceived needs for training in using various audiovisual resources.

Theoretical Assumptions

Humans experience the world through the five senses. Seeing is the most effective of the senses. It provides concrete experiences for the symbolic, and thereby language acquires full meaning and effectiveness. Audiovisual education ties the concrete experiences (seeing) to the symbolic (language) and enables humans to learn faster

and in a more permanent fashion.

Dale (1954) argued that visual aids, when properly used, should: result in more learning, supply a concrete basis for conceptual thinking, help students to remember longer what they have learned, increase their interest in things being taught, result in an overall saving of time, and give teachers greater confidence in their abilities.

Visual education enhances learning because it follows more closely the natural way humans learn. The use of audiovisual resources can set the tone and conditions conducive to learning. A personal impression or idea of a concrete experience is formed. However, persons learn as individuals. The learning proceeds from the known to the unknown. Audiovisual resources can help persons bridge time and place gaps by participation in the audiovisual experience. Learners experience remote and isolated things and events through the audiovisual experience. By using audiovisual resources, chaplains can enhance their ministries (Oddie, 1974). By providing concrete religious experiences through audiovisual resources, members of the Naval chapel community will grow spiritually and morally in a more effective way (Hockman, 1947).

Importance of the Study

The rationale for the study was to enhance the effectiveness of Navy chaplains' ministries through the utilization of audiovisual resources. The Navy, through

the office of the Chief of Naval Education and Training, has been supporting chaplains' needs for audiovisual resources in religious programs and training. Knowledge of Navy chaplains' perceived needs for audiovisual resources helps: (1) the Chief of Naval Education and Training to provide Navy chaplains the desired audiovisual support, (2) the chaplains to plan and provide meaningful religious ministries, and (3) the members of the Naval community to grow morally and spiritually through participation in enriched religious programs.

Chaplains' need for audiovisual products had not been determined. It was not known whether chaplains and religious programs received adequate support or not. In light of that fact, it was important to determine Navy chaplains' perceived needs for audiovisual products for use in religious programs.

The following areas were of particular importance to the study:

1. The Navy provides and maintains a collection of audiovisual resources to support religious training and programs. Navy chaplains plan and implement the Navy's religious programs. It is important to know what level of competence chaplains possess in using audiovisual resources. The study highlights Navy chaplains' competence in planning and using audiovisual resources.

2. The Naval Education and Training Support Centers are supposed to provide support to chaplains and

their religious programs, whether afloat or ashore. It is important to know what level of awareness chaplains have of this support and the resources provided. The study highlights Navy chaplains' knowledge of audiovisual resources available through Naval Education and Training Support Centers.

3. The Naval Education and Training Support Centers are supposed to provide audiovisual resources that meet the perceived needs of Navy chaplains for use in religious programs and training. It is important to know the perceived relative importance of various audiovisual resources to chaplains for use in religious programs afloat and ashore. The study highlights the importance of various audiovisual resources to chaplains.

4. Chaplains should be adequately trained to use the various audiovisual resources in their ministry. It is important what training chaplains feel they need to enhance their use of audiovisual resources. The study highlights Navy chaplains' need for training in using various audiovisual resources.

Scope of the Study

The study was delimited only to the active duty male chaplains of the United States Navy. The two female chaplains who were randomly selected did not respond. Since Navy chaplains are assigned to the U.S. Marine Corps, the U.S. Coast Guard, and U.S. Naval commands

afloat and ashore, the study reflects this diversity.

The study was delimited to Navy chaplains' knowledge of audiovisual resources. It does not include the content or subject matter of audiovisual resources. The study reflects Navy chaplains' awareness of various audiovisual resources and knowledge of the availability of these resources.

The study was delimited only to Navy chaplains' perceived need for training in various audiovisual resources. It does not include any other perceived needs for training.

Further, the study was delimited only to Navy chaplains' perceived importance of audiovisual resources. It does not include the importance of audiovisual resources to any others. Finally, the study was delimited only to Navy chaplains' competence and use of audiovisual resources. It does not include any other uses or competencies.

Definition of Terms

The following are words and phrases defined for purposes of the study:

Perceived needs refers to the way Navy chaplains understand their need for the use of audiovisual products in religious programs (Webster's New World Dictionary, 1972).

Religious programs are any of a number of religious training, worship or nurture activities conducted for the

spiritual and/or moral development of Navy personnel (Webster's New World Dictionary, 1972).

Audiovisual products refers to the software of the media industry, which contains the information. Audiovisual products could mean television programs, videotapes, films, filmstrips, charts, slides, and audiotapes. These products are sometimes called training aids, educational resources, teaching aids, or audiovisual aids (Webster's New World Dictionary, 1972).

Audiovisual resources refers to the hardware and software of the audiovisual industry. Hardware includes all equipment and machines used to communicate the information; software contains the information. Software could be either projected or nonprojected. Neither is any good without the other (Hockman, 1947).

Organization of Remainder of Dissertation

The remainder of the dissertation is organized as follows: Chapter 2 contains a review of the literature; Chapter 3, research methods; Chapter 4, research findings; and Chapter 5, a conclusion, discussion and implications.

Chapter 2

REVIEW OF THE LITERATURE

The literature was reviewed within this chapter according to the following outline: (1) a historical overview of the development of audiovisual resources, (2) the philosophy and purpose of visual education, (3) types of audiovisual resources, and (4) uses of audiovisual resources in religious programs.

Historical Overview of the Development of Audiovisual Resources

The use of audiovisual resources in education and religious programming is a 20th century development. Visual education has its roots in antiquity. Visual communication probably developed prior to the development of spoken communication or language. Many cave paintings and artifacts of early civilization indicate that man communicated with and through the medium of pictures/paintings.

Rogers and Vieth (1946) presented a history of the use of visual aids in religious education in terms of a series of waves which gradually built into a tide. The first wave extended from 1895 to 1919. During this period

the motion picture, first demonstrated by Thomas Edison in 1894, was accepted much more readily than the blackboard. Fifteen years after the

first film showing, more than a thousand films were available for educational purposes, and the superintendent of the New York City schools was recommending that motion picture projectors be installed in the New York schools (Wiman, 1969:24).

Motion pictures, however, were only occasionally recognized as having educational value in the church. During this period, motion pictures were used in churches to help swell attendance, even though many of the early motion pictures were on religious subjects (Rogers and Vieth, 1946).

The importance of motion pictures to the church was beginning to be recognized in 1915, when a report on "Motion Pictures in Religious Education Work" was prepared for the commission of the church and social service of the Federal Council of Churches by Edward M. McConoughey (Rogers and Vieth, 1946:3).

The culmination of motion picture development came in 1918 and 1919 when the Inter-Church World Movement set up both motion picture and stereopticon slide departments.

Also during the period of this first wave, the use of stereopticon slides developed. Missionaries and mission board executives pioneered with the use of slides in churches. The building of slide sets on the mission fields began at least as early as 1902 (Rogers and Vieth, 1946). Missionaries and/or board executives would take pictures of the work in mission fields and make them into slides for promotional purposes. The churches found more and more uses for slides in religious programs. Slides allowed work to be shared with those unable to visit on-site. Slides afforded new capabilities for storage and retrieval of pictorial history.

The development of motion pictures and slides during the period 1895 to 1919 marked the beginning of a modern visual education program in the church.

The next wave extended from 1920 to about 1930.

This was the period of the magnificent 1920's--brave dreams, tremendous projects almost lightly undertaken, easy money, rampant optimism, capped by an economic depression which brought many of the dreams and undertakings to disaster. The course of visual education in the churches was much like that of the frog in the well--jumping up five feet and falling back four (Rogers and Vieth, 1946:8).

The income of the mission boards, which were most keenly interested in visual education, began to decline and budgets were tightened.

Motion pictures were so popular that many people unthinkingly dubbed slides as "old fashioned." Motion picture film of this period was 35mm size only. Many churches had sizable investments in this equipment. By the end of the 1920's, the 16mm projector with the much safer 16mm film had made the 35mm equipment obsolete. No new films were being released for the 35mm equipment. At about the same time (1928) sound films were successfully introduced in the theaters. The film industry began to produce 16mm sound films only. Only those theaters, churches and educational groups with 16mm sound projectors could show new films. Church-owned 35mm silent projectors were doubly obsolete.

The next wave began about 1931 and extended up to 1942 or 1943. This period was quite different from the

preceding years. The novelty and glamor of motion pictures had worn off, boards and churches had suffered losses with outdated inventories, and ministers who had tried to build large congregations by showing movies found that the crowds vanished with the novelty.

This period was marked by three major developments and changes in the use of audiovisuals. The 16mm sound projector was introduced and brought to high acceptability (Rogers and Vieth, 1946). This technological development provided churches and schools with equipment and films comparable in technical quality to those of the theater.

The second development was the introduction of Kodachrome film and its use in miniature (2" x 2") slides. Anyone could make slides. The slides were less fragile and more economical to make and to distribute than the other stereopticon glass slides (Rogers and Vieth, 1946).

The most constructive development of this period, in the religious and also in the educational field, was the emergence of a new approach to the use of visual materials (Rogers and Vieth, 1946). Ministers and teachers came to regard visual materials as tools to aid in the presentation of a message. Films could not be expected to do the whole job of teaching or preaching. Visual materials were carefully integrated with the curriculum, sermon, service of worship and so forth for maximum effectiveness.

The fourth wave of projected visual aid development

began about 1943 and continues to present. Rogers and Vieth (1946:21) stated that the period was characterized by the fact that

visual religious education reached the point of becoming a popular movement in a period when money was relatively plentiful, with the result that developments began to come on a more grandiose scale.

This period saw the emergence of visual aid workshops and organizations to train persons in the preparation and use of visual aids. Church boards committed more and more of their financial resources to the development and production of quality films and slides. Visual aids were in church programs to stay.

Kanner (1960), Tower (1950), and Rogers and Vieth (1946) argued that the Armed Forces contributed the major impetus for the development of motion pictures. During World War II the Armed Forces used motion pictures extensively to train millions of men and women in skills and attitudes. Following World War II, the Navy and the Army supported a series of studies by Pennsylvania State University beginning in 1947 (Kanner, 1960).

The Armed Forces had such success with using motion picture films and slides that they began to experiment with other types of visual aids. The Armed Forces were the first to experiment with television as a teaching aid (Kanner, 1960).

Visual aids were in the Armed Forces to stay. The Navy established film libraries in every naval district, at

various air stations and centers, and at selected locations outside the continental United States to furnish all training films required by the Navy and Marine Corps, including both forces afloat and ashore (U.S. Navy, 1946).

Philosophy and Purpose of Visual Education

A visual aid is any visible thing that is used to make more clear the meaning of a word or verbal idea. Visual education is the effort to help people to learn through seeing (Rogers and Vieth, 1946).

Humans have five senses through which to gain knowledge of the world. Humans experience the world almost every waking moment through the senses. Visual education just seeks to increase the amount of desirable experiences which enter through the eyes (Rogers and Vieth, 1946).

Ends (1969), Hockman (1947), Tower (1950), Waldrup (1949), Wood and Freeman (1929), and Rogers and Vieth (1946) argued that humans understand their world through language. There are words for actions, things, and feelings. The words are only signs or symbols for something beyond themselves. Human communication is largely through spoken or written words, but words are limited. When the hearer does not have the words tied to concrete experiences of his own, the language (words) loses full meaning and effectiveness. Learning begins with the concrete

experience and moves to the symbolic. Words have full meaning only after the hearer has had the experience. Visual education consists of all those activities and efforts which keep teaching tied as closely as possible to concrete experiences. "Communication is the heart of teaching and its process the veins and arteries through which knowledge flows" (Ends, 1969:193).

Tower (1950), Janes (1932), and Waldrup (1949) argued that the utilization of audiovisual resources must follow the usual ways a person learns:

1. A person must be ready for a learning experience. Audiovisual resources can set the tone and conditions conducive to learning.

2. Persons learn as persons and never as a group. Audiovisual resources impact upon the individual. A personal impression or idea of the experience is formed.

3. Learning proceeds from the known to the unknown. Audiovisual resources can bridge time and place and provide visual experiences of things that would be impossible. Learners can experience remote and isolated things and events through seeing.

4. Persons learn by doing. Audiovisual resources provide a personal experience for learners. There is a personal identification with the visual experience, and the learner is mentally participating.

Waldrup (1949) and Tower (1950) advocated the use of audiovisual resources primarily in the church's

educational program. They argued that audiovisual materials: (1) make learning faster, (2) make learning more permanent, (3) make learning more enjoyable, (4) complement and enrich other methods of teaching, and (5) effect changes.

Rogers and Vieth (1946) argued that there are many ways the church may use audiovisual resources. The following list is illustrative. The church may use audiovisual resources: (1) to give concrete content to a word, either a new word or one which is known but not understood; (2) to give life to a character or story; (3) to portray a setting for a story, an event, or a historical period; (4) to help the mind grasp the sweep of time, and the relation to each other of events in history; (5) to develop attitudes toward others; (6) to show in action the meaning of an ideal; (7) to convey Christian truth with emotional appeal; and (8) to give meaningful content to the words of a hymn (Rogers and Vieth, 1946).

The purpose and value of audiovisual education in the church was comparable to that in the schools and the military. Dale (1954) and the U.S. Navy (1946) argued that motion picture and filmstrip training aids, if properly used, should: (1) result in more learning, (2) supply a concrete basis for conceptual thinking, (3) help students to remember longer what they have learned, (4) increase their interest in things being taught, (5) help make training more uniform, (6) give

trainers greater confidence in their ability to do their job, and (7) result in an overall saving of time.

Dale (1954), Tower (1950), and Waldrup (1949) concurred that audiovisual materials are not substitutes for other methods; they can complement other methods. Visual aids should not be used for entertainment nor as crowdgetters. Visual aids do not substitute for preparation. Audiovisual materials are effective, but preparation by the user is required for maximum results (U.S. Navy, 1945).

Rawls (1977) and Oddie (1974) agreed that one should consider using audiovisual resources whenever one needs to communicate an idea. Film is a national medium in this day and age (Thornton, 1977). The U.S. Air Force (1980) and Godfrey (1967) concurred that film is a significant tool for teaching, a powerful weapon in the battle for men's loyalties, a dynamic device through which persons can move beyond the printed or spoken word and experience the concrete things of life. According to the U.S. Air Force (1980), film facilitates understanding, growth and change.

For the purpose of the present study audiovisual resources can be thought of as having three major functions: providing information, socializing, and mobilization (Janowitz and Street, 1967). Brown, Lewis, and Harcleroad (1977) and Curl (1972) argued that inclusion of audiovisual resources in the processes of instruction requires carefully thought out purposes as well as judiciously selected kinds

of resources appropriate to the subject, the students and the environment. Dale (1954) and McKeachie (1967) supported the necessity of planning an intelligent use of audiovisual resources. Wood and Freeman (1929) stated that the casual introduction of films into the curriculum without careful planning and careful organization is of comparatively little value. Biddle and Rossi (1967) and Meierhenny (1969) argued for a training program for users of audiovisual resources. Equipment is only an instrument of transmission of information. The primary effort should be directed toward how to develop a more thorough knowledge of how to design instructional messages (Wiman, 1969).

Reynolds (1972) and Godfrey (1967) argued that instructors frequently did not use audiovisual teaching aids at their disposal because they lacked the specialized training. It was learned that teachers who had received some specialized training were more likely to use audiovisual materials than their untrained colleagues (Godfrey, 1967).

Reynolds (1972) also argued that hardware and software are often ordered without having first considered what function they will serve. Instructors often do not know what audiovisual resources exist.

Types of Audiovisual Resources

Audiovisual resources are divided into two groups: (1) hardware, which consists of the equipment or machines used in audiovisual presentations; and (2) software, which contains the information to be communicated. Reynolds (1972) argued that hardware is the tool by which information is communicated and software contains the information. Hardware and software go together; neither is of any use without the other.

Second, software is divided into two groups. There are (1) projected visual aids such as films, filmstrips, slides, transparencies, etc.; and (2) nonprojected audiovisual aids such as charts, paintings, pictures, models, recordings, flipcharts, buttons, stickers, banners, etc.

Waldrup (1949) argued that nonprojected visual aids are most effective when used with small groups. Hockman (1947) and Waldrup (1949) argued that projected audiovisual materials have unlimited uses and value for the church and society as a whole.

There are four general types of projected audiovisual aids. Hockman (1947), Tower (1950), and Waldrup (1949) identified:

(1) opaque materials, which are projected by means of reflected light--included in this type are pages of books, pictures, photographs, etc;

(2) slides, which are projected onto a screen as

light passes through material--included in this type are stereopticon slides, miniature slides, and transparencies;

3. motion picture film, which is a projection of a series of still pictures in rapid succession onto a screen as light passes through film--this type could be silent or sound film; and

4. filmstrips, which are strips of 35mm film consisting of frames or pictures which are projected onto a screen as light passes through the film.

Audiovisual materials now include some recent technological developments such as video tapes, television, computer programs, and video disks.

Use of Audiovisual Resources in Religious Programs

Case (1960) and Tower (1950) made the point that the concern of religious education is with the total response of whole persons to a saving relationship with God in the fellowship of the community. The goal of the response is to reach more persons with the message.

Sloyan (1968), Hockman (1947), and Field (1974) argued that the task of religious education is to find the existentially important questions which are alive in the hearts and minds of the students and to provide continuing sustenance for the building of Christian lives. "Religion and education are inevitable companions of each other; for wherever any religion exists as a living, vital experience,

its adherents wish to guarantee its perpetuation" (Taylor, 1960:11).

Bowman et al. (1974) argued for the use of media in religious teaching programs. Waldrup (1949), Hockman (1947), and Tower (1950) argued that three factors should be considered when relating the use of visual aids to a church's program. The three factors are: (1) the objectives to be achieved, (2) the nature of the activities, and (3) the leadership in charge. The National Council of Churches of Christ in U.S.A. (1954) stated ten objectives for the use of audiovisual materials in religious programs. The objectives for the use of audiovisual resources in religious programs are: (1) developing a relationship with God, (2) developing a relationship with Jesus Christ, (3) building life through understanding of the Bible, (4) developing a relationship to the church, (5) developing a relationship to the missionary program, (6) fostering personal Christian living, (7) nurturing the Christian family, (8) developing constructive relations to the domestic order, (9) developing constructive relations to the international order, and (10) developing leadership for Christian education.

Tower (1960) advocated the use of audiovisual resources in the following program categories of the church: worship, study, fellowship, leadership training, and social action.

A number of master's theses have been written

dealing with audiovisual materials and the church. The majority of these studies have been about the effect of motion pictures on the programs of the churches concerned and religious uses of popular media such as television and radio. Only two of these studies were considered closely related to this study and deserve mention.

A thesis entitled "The Role of Audio-visual Materials in the Lutheran Church-Missouri Synod" by Robert Hinz (1956) at San Diego State College sought to determine the extent of the role of the Lutheran Church-Missouri Synod in creating audiovisual materials, and to interpret these activities as they related to the educational and evangelistic endeavors of the church. Using a historical approach, the author found that "since the days of the founders of the church there has been a decided emphasis on the use of sensory aids to learning" (Hinz, 1956:74). The Lutheran Church has kept up with the latest developments in audiovisual communication by operating a radio broadcasting station, producing radio and television shows, maintaining an audiovisual library, and producing recorded and transcribed materials for distribution among its congregations.

The second related thesis, entitled "The Role of Non-projected Audio-visual Materials in the Lutheran Church-Missouri Synod," was written by Marian Hinz (1960). In this study the author sought to determine what non-projected audiovisual materials were available within the

church, and to suggest ways the materials might be more effectively used in the educational work of the church. Using a historical approach the author found that the Lutheran Church "has endeavored to use many audio-visual materials in its work and has used the latest developments in the field of non-projected media of mass communication" (Hinz, 1960:81).

The most significant work in this area of study was the doctoral dissertation entitled "A Study of the Programs of Projected Audio-visual Materials in Religious and Missionary Education Among Selected Protestant Church Denominations on the National Level" by Tiemann (1951) at Indiana University. In this study the author attempted to ascertain the audiovisual services considered of greatest importance in attaining greater and better utilization of audiovisual materials and to make available information concerning the extent of audiovisual services provided by selected denominational agencies to local churches. After a survey of the methodology of 17 church bodies in selecting audiovisual materials, disseminating information about the resources to local congregations, and administering a resource and lending library, the author recommended new administrative procedures for the cooperating Protestant church bodies to enhance the utilization of audiovisual materials.

None of the empirical research revealed anything about Navy chaplains' utilization of audiovisual resources.

The review of literature in this chapter reflects the few empirical studies that have been conducted on the utilization of audiovisual resources in religious programs of church bodies and religious orders. There is no information on Navy chaplains' utilization of audiovisual resources in religious programs. The dearth of information on the utilization of audiovisual resources indicates the need for research in this field.

Summary

The use of visual aids in communication can be traced to antiquity. The most rapid development of the use of visual aids occurred largely in the 20th century. Since the invention of the film projector in 1894, advancements in visual and later audiovisual resources have been phenomenal.

The utilization of audiovisual resources requires a working knowledge of the audiovisual hardware and knowledge of the content of the software. The utilization should follow the natural way learning takes place: moving from the concrete to the abstract.

The users of audiovisual resources should be educated in the hardware and software of audiovisual resources in addition to educational procedures. Those who are trained in the uses of audiovisual resources are more likely to use them than their untrained colleagues.

Audiovisual resources can be used effectively in

all areas of church life, namely: worship, evangelism and education. Projected audiovisual resources have unlimited uses and value for the church.

Chapter 3

RESEARCH METHODS

The objective of the study was to determine U.S. Navy chaplains' utilization of audiovisual resources in religious programs. This chapter presents the research design, the procedures used for selection of subjects, instrumentation, data collection, data analysis, and methodological assumptions and limitations.

Research Approach and Design

A descriptive survey approach and single group posttest only design were utilized in the study. Using the guidelines of Isaac and Michael (1974), a structural questionnaire was designed to collect factual information from Navy chaplains about their utilization of audiovisual resources. The simplicity of the questionnaire made it a very valuable means of gathering factual data. Subjects were asked for information rather than watching them behave or sampling their behavior.

The questionnaire made it possible to measure what chaplains knew about audiovisual resources. It also made it possible to get information on chaplains' likes or dislikes of audiovisual resources. Using the questionnaire also had the advantage of providing what chaplains thought

of audiovisual resources. Their attitudes about audiovisual resources were pertinent to the study. The questionnaire made it possible to examine the statistical relationships of chaplains' knowledge, beliefs, values, and attitudes of audiovisual resources in determining their utilization of audiovisual resources.

Subject Selection

The target group of the study was U.S. Navy chaplains. There were 947 Navy chaplains on active duty as of September 4, 1981. These 947 chaplains were responsible for conducting the religious programs of the Navy, Coast Guard, and Marine Corps both ashore and afloat.

The U.S. Navy Chaplain Corps was composed of different levels of experience and training. The higher the rank of the chaplain, the more the experience and training. There were 2 Rear Admirals, 114 Captains, 291 Commanders, 248 Lieutenant Commanders, 217 Lieutenants, and 75 Lieutenants Junior Grade. To ensure the representativeness of the defined population, the stratified random sampling technique was used to control the experience variable (Oppenheim, 1966). Since there were only two Rear Admirals, who comprised .002 percent of the Chaplain Corps, the Rear Admiral group was dropped from the sampling. The Navy Chaplain Corps had the following rank proportions: Captains, 12 percent; Commanders, 30 percent; Lieutenant Commanders, 26 percent; Lieutenants, 23 percent; and

Lieutenants Junior Grade, 8 percent. The proportional stratified sampling was: Captains, 41; Commanders, 81; Lieutenant Commanders, 74; Lieutenants, 68; and Lieutenants Junior Grade, 27. A sampling of 291 chaplains would have created no more than a plus or minus .10 sampling error with a .05 confidence level. To allow for nonrespondents, each proportion was increased by 10 percent to: Captains, 45; Commanders, 89; Lieutenant Commanders, 82; Lieutenants, 75; and Lieutenants Junior Grade, 30. Three hundred twenty-one chaplains were randomly selected from the Chaplain Corps mailing list using a Random Numbers Table (Levine, 1981). One hundred ninety-three (60 percent) questionnaires were returned by the cutoff date.

Instrumentation

No comprehensive instrument existed that was designed to measure Navy chaplains' utilization of or need for audiovisual resources. Since the purpose of the study was to determine the number of chaplains who utilize audiovisual resources in religious programs, the instrument building effort was directed toward the goal of quantitative measurement (Oppenheim, 1966). The instrument was developed to solicit the factual information required to answer the specific research questions. The instrument was designed to measure the relationship of respondents' utilization of resources, knowledge of availability of resources, competence in planning the use of audiovisual resources,

competence in using resources, the importance of resources, need for training, rank (pay grade), and duty assignment.

The questionnaire (Appendix B) has nine general questions or parts measuring: (1) respondent's awareness of audiovisual products, (2) respondent's awareness of audiovisual resources available from Naval Education and Training Support Centers, (3) preferences of available audiovisual products, (4) importance of audiovisual resources, (5) competence in planning use of audiovisual products, (6) competence in using audiovisual resources, (7) need for training, (8) open-ended questions that enhance the utilization of audiovisual resources, and (9) personal information.

The questionnaire made use of four response modes: (1) fill-in, (2) scaled, (3) ranking, and (4) checklist (Tuckman, 1978). Items 1, 2, 5, 6, and 7 were scaled to provide interval data. These items measured levels of awareness, competence and understanding of audiovisual resources. Items 3 and 8 required the fill-in response mode. These items sought nominal data without biasing the respondent's judgment. Item 4 provided ordinal data by using the ranking response mode. The item also provided discriminatory information. Item 9 made use of the checklist response mode to provide nominal data about the respondents.

Validity and Reliability

Eleven chaplains, of Naval Surface Forces Pacific, participated in pilot testing the instrument for validity and reliability. These respondents were not participants in the random sampling. Following completion of the questionnaire, the pilot testing group was asked to write critical comments regarding the instrument. The group was also asked to talk about the questionnaire in a mutual effort to improve the instrument. Each questionnaire item was reviewed and critiqued for clarity. On the basis of both the verbal and written critiques, the instrument was modified.

The modified questionnaire was administered to the same group of chaplains one month later. Eight chaplains participated in the second testing. The items were matched and compared in test-retest for reliability. There was 89 percent correlation of the answers.

Content validity of the instrument was determined in two ways. A copy of the survey questionnaire was sent to the Deputy of Chaplain Education and Training Program Development to judge its effectiveness. The instrument was judged to be valid (see Appendix C). Three qualified professionals also judged the instrument to be valid.

Data Collection

On October 8, 1981, surveys were mailed to the 321 randomly selected Navy chaplains. A cover letter (see

Appendix D), a survey questionnaire, and a self-addressed, stamped envelope were included in each mailed packet. Subjects were invited to participate in the study by completing and returning the questionnaire. The respondents were informed that the purpose of the questionnaire was to determine Navy chaplains' utilization of audiovisual resources in religious programs and the identification of these resources. The respondents were further advised that all information would be considered confidential, and in no case would information be disclosed which would identify them as individuals. Returns received through November 6, 1981 were used in the study.

One hundred ninety-three questionnaires were returned and scored. The scores were tabulated so that the higher the total score of the respondent, the greater the respondent's awareness of audiovisual resources, knowledge of availability of audiovisual resources, competency in planning and using audiovisual resources, and need for training in using audiovisual resources.

Data Analysis

The initial analysis consisted of tabulating accumulated raw scores of respondents for the frequency and percentage of responses to each questionnaire item. This analysis provided data to meet the objectives.

A frequency summary analysis of responses to item 1 of the questionnaire supplied the data to determine

Navy chaplains' knowledge of audiovisual resources. The objective concerning what audiovisual resources are available in the Navy and chaplains' opinion of how available was determined by a frequency summary analysis of response to item 2. The objective concerning chaplains' competence in planning the use of audiovisual resources was determined by using frequency summary analysis of responses to item 5 of the questionnaire. Respondent counting and a frequency summary analysis of responses to item 6 of the questionnaire provided the data to determine Navy chaplains' competency in using audiovisual resources. The objective concerning chaplains' attitudes toward various audiovisual resources was determined by coding the response data in questionnaire items 3 and 4 and using respondent counting to determine frequency and percentages. Respondent counting and a frequency summary analysis of the responses to questionnaire item 7 provided data to determine Navy chaplains' need for training in using audiovisual resources.

A frequency summary analysis of questionnaire item 9 provided the data to ensure sampling was representative of the Navy Chaplain Corps. Subsequently, each item of the questionnaire was presented in cross-tabulation form displaying the distribution of scores and percentages for each chaplain. The analysis was accomplished by key punching the data into a computer and running a program which included item analysis, correlation, means, and standard deviation.

Additionally, the total scores of chaplains' knowledge of resources (item 1) were correlated with: chaplains' knowledge of resources available through Naval Education and Training Support Centers (item 2), chaplains' competency in planning the use of resources (item 5), chaplains' competency in using resources (item 6), and chaplains' need for training. These correlations verified the item analysis data.

A frequency summary analysis, ranking, and correlation of the data in items 3 and 4 of the questionnaire provided the importance of various audiovisual resources to chaplains. A correlation of the scores of chaplains' competency in using various resources with the scores of chaplains' need for training in the various resources provided verification of chaplains' competence and need for training with various resources.

Methodological Assumptions and Limitations

The questionnaire was mailed to 321 Navy chaplains. It was assumed that all of them would be willing to cooperate by responding to the questionnaire.

Considering the fact that chaplains are ordained ministers, it was assumed that the respondents would not respond with their opinions of what ought to be or with what they thought was the expected response, but rather, the respondents would tell what was fact and true.

Also, because of their profession, it was assumed that the respondents would know what they felt and thought about audiovisual resources. It was assumed that they would report honestly.

The survey instrument was assumed to be sufficiently reliable and valid. The study was limited to gathering data by a researcher-designed questionnaire. The instrument was field tested for reliability and content validity and found effective.

The survey questionnaire limited the research to what the respondents said. It measured the verbal response. The survey questionnaire did not measure what the respondents believed or liked, unless the beliefs or preferences were reported as the true response. This, of course, illustrates the limitation of the questionnaire technique.

The study was also limited by the questions of the questionnaire. Caution was used to avoid phrasing the questions in such a way that they might influence the respondents to: (1) show themselves in a good light, (2) be unduly helpful by attempting to anticipate what the researcher wanted to find out, and (3) answer a question that they might not be certain of or not know.

Another limitation of the study was its single target population. One weakness of survey research is its lack of comparative data or a control group (Tuckman, 1978).

Chapter 4

RESEARCH FINDINGS

In Chapter 1, six objectives were presented that would achieve the purpose of this study. This chapter reports the findings that relate to the respective objectives.

A description is first given to identify demographic characteristics of chaplains. The findings are then grouped into eight general areas which are:

(1) chaplains' knowledge of audiovisual resources;
(2) chaplains' knowledge of audiovisual resources available through Naval Education and Training Support Centers, Atlantic and Pacific; (3) audiovisual resources chaplains would like to use in their ministries; (4) the order of importance chaplains placed on various audiovisual resources in their ministries, and the differences between importance and what audiovisual resources they would like to use;
(5) the lack of competency chaplains have in planning the use of various audiovisual resources; (6) chaplains' level of competency in using various audiovisual resources;
(7) the need for training in using various audiovisual resources; and finally (8) a content analysis of the open-ended questions that were asked and additional findings.

Demographic Profile of Chaplains

Demographic data were utilized as variables by which to ensure the sample population was representative of the Navy Chaplain Corps. The demographic variables so utilized were duty station and rank.

The sample was comprised of 154 chaplains stationed with Navy units ashore, afloat and overseas; 6 chaplains with the Coast Guard; and 33 chaplains assigned to the Marine Corps, for a total of 193 respondents. The respondents represented Navy, Coast Guard, and Marine Corps duty stations 80 percent, 3 percent, and 17 percent, respectively (Table 1).

A total of 321 questionnaires were sent to 45 Captains, 89 Commanders, 82 Lieutenant Commanders, and 105 Lieutenants and Lieutenants Junior Grade, who comprised 12 percent, 30 percent, 26 percent, and 32 percent of the sample, respectively. Of the 321 questionnaires which were mailed, 193 (60 percent) were returned by the cutoff date. Of the 193 respondents, 38 or 20 percent were Captains, 66 or 34 percent were Commanders, 46 or 24 percent were Lieutenant Commanders, while Lieutenants and Lieutenants Junior Grade comprised 43 or 22 percent. Since the cutoff date, 14 more questionnaires were returned from four Captains, three Commanders, two Lieutenant Commanders, and five Lieutenants Junior Grade. It is interesting to note that overall 42 of 45 Captains responded,

Table 1

Demographic Profile of Chaplains: Frequency
and Percentage by Duty and Rank
(N = 193)

Response item and category	f	%
Duty station:		
Navy	154	80
Coast Guard	6	3
Marine Corps	<u>33</u>	<u>17</u>
Total	193	100
Rank:		
Captain	38	20
Commander	64	33
Lieutenant Commander	47	24
Lieutenant and Lieutenant Junior Grade	<u>44</u>	<u>23</u>
Total	193	100

69 of 89 Commanders responded, 48 of 82 Lieutenant Commanders responded, and 48 of 105 Lieutenants and Lieutenants Junior Grade responded (Table 2).

Findings According to Objectives

The purpose of the study was to determine Navy chaplains' utilization of audiovisual resources in their ministries. Six objectives were stated to make this determination. The following are the findings according to each objective.

Objective 1

The first objective was to determine Navy chaplains' knowledge of various audiovisual resources.

The respondents indicated their knowledge of 27 audiovisual resources to item 1 by making any one of the following: no knowledge, little knowledge, knowledgeable, or very knowledgeable. The respondents indicated that they were most knowledgeable of tape recorders. A total of 169 (88 percent) of the respondents indicated they were very knowledgeable, 13 (7 percent) were knowledgeable, 4 (2 percent) had little knowledge, and 7 (4 percent) had no knowledge of the resource (Table 3).

The respondents' knowledge of the slide projector was as follows: 157 (81 percent) were very knowledgeable, 24 (12 percent) were knowledgeable, 6 (3 percent) had a little knowledge, and 6 (3 percent) had no knowledge of

Table 2

Return Data: Frequency and Percentage by
Rank of Chaplain

Rank of captain	Questionnaires sent		Questionnaires returned		Overall return (%)
	f	%	f	%	
Captain	45	12	38	20	84
Commander	89	30	66	34	74
Lieutenant Commander	82	26	46	24	56
Lieutenant and Lieutenant Junior Grade	105	32	43	22	41
Total	321		193		

Table 3

Chaplains' Knowledge of Audiovisual Resources:
Frequency, Percentage, Mean, and Standard
Deviation by Resource Item (N = 193)

Resource item	No knowl- edge		Little knowl- edge		Knowl- edgeable		Very knowl- edgeable		Mean ^a	S.D.
	f	%	f	%	f	%	f	%		
Tape recorder	7	4	4	2	13	7	169	88	2.78	.655
Slide projector	6	3	6	3	24	12	157	81	2.72	.670
Slides	4	2	8	4	31	16	150	78	2.69	.647
16mm projector	7	4	7	4	25	13	154	80	2.69	.710
16mm film	5	3	8	4	30	16	150	78	2.68	.674
Audio recordings	8	4	10	5	25	13	150	78	2.64	.762
Filmstrip projector	6	3	10	5	42	22	135	70	2.59	.729
Posters	8	4	11	6	42	22	132	68	2.54	.781
Overhead projector	5	3	17	9	39	20	132	68	2.54	.761
Filmstrips	8	4	16	8	38	20	131	68	2.51	.815
Transparencies	9	5	17	9	47	24	120	62	2.44	.838
Photographs	17	9	21	11	41	21	114	59	2.41	.178
Overlays	12	6	23	12	55	28	103	53	2.29	.904
Pictures	13	7	23	12	53	27	104	54	2.28	.920
Video tapes	13	7	36	19	57	30	87	45	2.13	.943
Video recorder/ player	12	6	39	20	56	29	86	45	2.11	.939
Opaque projector	22	11	30	16	53	27	88	46	2.07	1.03
Video camera	19	10	46	24	46	24	82	42	1.99	1.03

Table 3 (continued)

Resource item	No knowl- edge		Little knowl- edge		Knowl- edgeable		Very knowl- edgeable		Mean	S.D.
	f	%	f	%	f	%	f	%		
8mm projector	21	11	34	18	69	36	69	36	1.96	.983
8mm film	20	10	34	18	73	38	66	34	1.95	.964
Paintings	18	9	40	21	69	36	66	34	1.95	.959
Collages	24	12	43	22	62	32	64	33	1.86	1.01
Video disk player	50	26	98	51	34	18	11	6	1.03	.813
Video disks	52	27	100	52	32	17	9	5	.989	.788
Dissolver	88	46	53	27	25	13	27	14	.953	1.07
Computer	64	33	95	49	15	8	19	10	.943	.894
Computer program	64	33	93	48	19	10	17	9	.943	.883

^aGrand mean = 2.10.

the resource.

Of the respondents, 150 (78 percent) indicated that they were very knowledgeable of slides, 31 (16 percent) were knowledgeable, 8 (4 percent) had little knowledge, and 4 (2 percent) had no knowledge.

A total of 154 respondents (80 percent) were very knowledgeable of 16mm film projectors, 30 (16 percent) were knowledgeable, 8 (4 percent) had little knowledge, and 7 (4 percent) had no knowledge of the resource.

A total of 150 respondents (78 percent) were very knowledgeable of 16mm film, 30 respondents (16 percent) were knowledgeable, 8 respondents (4 percent) had a little knowledge, and 5 respondents (3 percent) had no knowledge.

A total of 150 respondents (78 percent) were very knowledgeable of audio recordings, 25 (13 percent) were knowledgeable of the resource, 10 respondents (5 percent) had a little knowledge, and 8 respondents (4 percent) had no knowledge of audio recordings.

Of the respondents, 135 (70 percent) were very knowledgeable of the filmstrip projector, 42 (22 percent) were knowledgeable, 10 (5 percent) had a little knowledge, and 6 (3 percent) had no knowledge of the resource.

With regard to posters, 134 respondents (68 percent) were very knowledgeable, 42 (22 percent) were knowledgeable, 11 (6 percent) had little knowledge, and 8 (4 percent) had no knowledge.

A total of 132 respondents (68 percent) were very

knowledgeable of the overhead projector, 39 respondents (20 percent) were knowledgeable, 17 (9 percent) had little knowledge, and 5 (3 percent) had no knowledge.

The respondents indicated that 131 (68 percent) of them were very knowledgeable of filmstrips, 38 (20 percent) were knowledgeable, 16 (8 percent) had little knowledge, and 8 (4 percent) had no knowledge of the resource.

A total of 120 respondents (62 percent) were very knowledgeable of transparencies, 47 (24 percent) were knowledgeable, 17 (9 percent) had little knowledge of the resource, while 9 (5 percent) had no knowledge.

With regard to photographs, 114 respondents (59 percent) were very knowledgeable, 41 (21 percent) were knowledgeable, 21 (11 percent) had little knowledge, while 17 (9 percent) had no knowledge.

The respondents indicated that 103 (53 percent) of them were very knowledgeable of overlays, 55 (28 percent) were knowledgeable, 23 (12 percent) had a little knowledge, and 12 (6 percent) had no knowledge of the resource.

Of the respondents, 104 (54 percent) were very knowledgeable of pictures, 53 (27 percent) were knowledgeable, 23 (12 percent) had a little knowledge, and 13 (7 percent) had no knowledge.

With regard to video tapes, 87 of the respondents (45 percent) were very knowledgeable, 57 (30 percent) were knowledgeable, 36 (19 percent) had a little knowledge, and 13 (7 percent) had no knowledge.

Eighty-six respondents (45 percent) were very knowledgeable of video recorders/players, 56 (29 percent) were knowledgeable, 39 (20 percent) had little knowledge, and 12 (6 percent) had no knowledge.

Eighty-eight of the respondents (46 percent) were very knowledgeable of the opaque projector, 53 (27 percent) were knowledgeable, 30 (16 percent) had a little knowledge of the resource, and 22 (11 percent) had no knowledge.

The respondents indicated that 82 (42 percent) of them were very knowledgeable of the video camera, 46 (24 percent) were knowledgeable, 46 (24 percent) had little knowledge, and 19 (10 percent) had no knowledge.

Sixty-nine of the respondents (36 percent) were very knowledgeable of the 8mm projector, 69 (36 percent) were knowledgeable, 34 (18 percent) had a little knowledge, and 21 (11 percent) had no knowledge.

Sixty-six respondents (34 percent) were very knowledgeable of 8mm films, 73 (38 percent) were knowledgeable of the resource, 34 (18 percent) had little knowledge, and 20 (10 percent) had no knowledge.

Sixty-six of the respondents (34 percent) were very knowledgeable of paintings, 69 (36 percent) were knowledgeable, 40 (21 percent) had little knowledge, and 18 (9 percent) had no knowledge of the resource.

Sixty-four respondents (33 percent) were very knowledgeable of collages, 62 (32 percent) were knowledgeable, 43 (22 percent) had little knowledge, and 24 (12

percent) had no knowledge.

Eleven of the respondents (6 percent) were very knowledgeable of video disk players, 34 (18 percent) were knowledgeable, 98 (51 percent) had little knowledge, and 50 (26 percent) had no knowledge.

Nine respondents (5 percent) were very knowledgeable of video disks, 32 (17 percent) were knowledgeable, 100 (52 percent) had little knowledge, and 52 (27 percent) had no knowledge.

Twenty-seven respondents (14 percent) were very knowledgeable of the slide dissolver, 25 (13 percent) were knowledgeable, 53 (27 percent) had little knowledge, and 88 (46 percent) had no knowledge.

Nineteen respondents (10 percent) were very knowledgeable of computers, 15 (8 percent) were knowledgeable, 95 (49 percent) had little knowledge, and 64 (33 percent) had no knowledge.

The respondents indicated that 17 (9 percent) of them were very knowledgeable of computer programs, 19 (10 percent) were knowledgeable, 93 (48 percent) had little knowledge, and 64 (33 percent) had no knowledge.

Overall, Navy chaplains perceived themselves to be very knowledgeable of audiovisual resources (Table 3).

Objective 2

The second objective was to determine Navy chaplains' knowledge of various audiovisual resources available through Naval Education and Training Support Centers.

Item 2 of the questionnaire contains a list of 14 audiovisual software resources. The respondents marked not available, or in inventory, or readily available, or not known for each of the audiovisual resources listed. A mark in either not available, in inventory, or readily available indicated the respondent's knowledge about the availability or unavailability of the resource (Table 4).

A total of 161 respondents (83 percent) had knowledge of the availability of films and 32 (17 percent) did not know.

Of the respondents, 153 (79 percent) knowledge of the availability of filmstrips and 40 (21 percent) did not know.

The respondents indicated that 131 (68 percent) of them had knowledge of the availability of audio recordings and 62 (32 percent) had no knowledge.

A total of 129 respondents (67 percent) had knowledge of the availability of slides; 64 (33 percent) had no knowledge.

A total of 126 respondents (65 percent) had knowledge of the availability of transparencies; 67 (35

Table 4

Chaplains' Knowledge of Resources Available at
Naval Education and Training Support
Centers: Frequency, Percentage,
Mean and Standard Deviation
by Resource Item (N = 193)

Resource item	Not avail-able		In inven-tory		Readily avail-able		Known		Not known		Mean ^a	S.D.
	f	%	f	%	f	%	f	%	f	%		
Films	42	22	43	22	108	56	161	83	32	17	.834	.372
Filmstrips	58	30	51	26	84	44	153	79	40	21	.792	.405
Audio recordings	78	40	46	24	69	36	131	68	62	32	.679	.467
Slides	78	40	42	22	73	38	129	67	64	33	.668	.471
Trans- parencies	90	47	37	19	66	34	126	65	67	35	.653	.476
Video tapes	110	57	38	20	45	23	122	63	71	37	.632	.482
Posters	93	48	28	15	72	37	119	62	74	38	.617	.486
Transparent overlays	104	54	29	15	60	31	118	61	75	39	.611	.487
Pictures	95	49	32	17	66	34	118	61	75	39	.611	.487
Photographs	96	50	37	19	60	31	116	60	77	40	.601	.490
Paintings	131	68	29	15	33	17	105	54	88	46	.544	.498
Collages	140	73	15	8	38	20	86	45	107	55	.446	.497
Computer programs	175	91	6	3	12	6	82	42	111	58	.424	.494
Video disks	183	94	5	3	5	3	82	42	111	58	.424	.494

^aGrand mean = .610.

percent) had no knowledge.

Of the respondents, 122 (63 percent) had knowledge of the availability of video tapes; 71 (37 percent) had no knowledge.

A total of 119 respondents (62 percent) had knowledge of the availability of posters; 74 (38 percent) had no knowledge.

A total of 118 respondents (61 percent) had knowledge of the availability of transparent overlays; 75 (39 percent) had no knowledge.

The respondents indicated that 118 (61 percent) of them had knowledge of the availability of pictures; 75 (39 percent) had no knowledge.

A total of 116 respondents (60 percent) indicated that they had knowledge of the availability of photographs; 77 (40 percent) had no knowledge.

With regard to the availability of paintings, 105 respondents (54 percent) had knowledge of the availability and 88 (46 percent) had no knowledge.

With regard to the availability of collages, 86 respondents (45 percent) had knowledge of the availability, and 107 (55 percent) had no knowledge.

Eighty-two respondents (42 percent) had knowledge of the availability of computer programs and 111 (58 percent) had no knowledge.

The respondents indicated that 82 (42 percent) of them had knowledge of the availability of video disks; 111

(58 percent) of them had no knowledge.

Overall, Navy chaplains perceived themselves to be very knowledgeable of the availability of resources (Table 4). The respondents had more knowledge of the availability of films and least knowledge about the availability of video disks and computer programs.

Objective 3

The third objective was to determine Navy chaplains' level of competence in planning the use of audio-visual resources.

The respondents indicated that 167 (86 percent) of them had planned the use of films, 23 (12 percent) know how, and 3 (2 percent) did not know how to plan the use of the resource.

A total of 155 respondents (80 percent) had planned the use of slides, 36 (19 percent) knew how, and 2 (1 percent) did not know how to plan the use of slides.

Of the respondents, 142 (74 percent) had planned the use of audio recordings, 37 (19 percent) knew how to plan the use of audio recordings, and 14 (7 percent) did not know how.

A total of 125 (70 percent) of the respondents had planned the use of posters, 49 (25 percent) knew how to plan the use of posters, and 9 (5 percent) did not know.

A total of 127 respondents (65 percent) had planned the use of pictures, 53 (27 percent) knew how, and 13

(7 percent) did not know how to plan the use of pictures.

Of the respondents, 128 (66 percent) had planned the use of transparencies, 52 (27 percent) knew how to plan the use of the resource, and 13 (7 percent) did not know how to plan the use of transparencies.

The respondents indicated that 99 (51 percent) of them had planned the use of photographs, 79 (41 percent) knew how to plan the use of them, and 15 (8 percent) did not know how.

A total of 107 respondents (55 percent) had planned the use of transparent overlays, 63 (33 percent) knew how to plan the use of the resource, and 20 (12 percent) did not know how.

Seventy-eight respondents (40 percent) had planned the use of paintings, 89 (46 percent) knew how to plan the use of paintings, and 26 (13 percent) did not know how.

Eighty-four respondents (44 percent) had planned the use of video tapes, 77 (40 percent) knew how, and 32 (17 percent) did not know how to plan the use of video tapes.

Sixty-eight respondents (35 percent) had planned the use of collages, 82 (42 percent) knew how, and 43 (22 percent) did not know how.

Twelve respondents (6 percent) had planned the use of video disks, 50 respondents (26 percent) knew how to plan the use of video disks, and 131 respondents (68

percent) did not know how to plan the use of video disks.

Eighteen respondents (9 percent) had planned the use of computer programs, 13 (7 percent) knew how to plan the use of computer programs, and 162 (84 percent) did not know how to plan the use of computer programs.

Overall, Navy chaplains reported themselves to be between having planned the use of audiovisual resources and knowing how to plan the use of audiovisual resources. Chaplains perceived themselves to be very competent in planning the use of audiovisual resources. Table 5 shows the details of chaplains' competency in planning the use of various audiovisual software resources. Chaplains reported to have greatest competency in planning the use of films and the least competency in planning the use of computer programs.

Objective 4

The fourth objective was to determine Navy chaplains' level of competence in using audiovisual resources.

To determine chaplains' level of competence in using audiovisual resources, chaplains were asked to indicate whether they had used, knew how to use, or had not used two groups of audiovisual resources. The first group contained audiovisual software.

A total of 178 respondents (92 percent) had used films, 11 (6 percent) knew how to use films, and 4 (2 percent) had not used films.

Table 5

Chaplains' Competency in Planning the Use of
Resource Items: Frequency, Percentage,
Mean and Standard Deviation by
Resource (N = 193)

Resource item	Have planned use of		Know how to plan use of		Do not know how to plan use of		Mean ^a	S.D.
	f	%	f	%	f	%		
Films	167	86	23	12	3	2	1.85	.407
Slides	155	80	36	19	2	1	1.79	.430
Audio recordings	142	74	37	19	14	7	1.66	.607
Posters	135	70	49	25	9	5	1.65	.573
Pictures	127	65	53	27	13	7	1.59	.621
Transparencies	128	66	52	27	13	7	1.59	.612
Photographs	99	51	79	41	15	8	1.44	.633
Transparent overlays	107	55	63	33	23	12	1.43	.695
Paintings	78	40	89	46	26	13	1.27	.683
Video tapes	84	44	77	40	32	17	1.27	.727
Collages	68	35	82	42	43	22	1.13	.747
Video disks	12	6	50	26	131	68	.383	.600
Computer programs	18	9	13	7	163	84	.254	.613

^aGrand mean = 1.33.

The respondents indicated that 176 (91 percent) of them had used filmstrips, 13 (7 percent) knew how, and 4 (2 percent) had not used filmstrips.

Of the respondents, 172 (89 percent) had used slides, 19 (10 percent) knew how to use the resource, and 2 (1 percent) had not used slides.

A total of 161 respondents (83 percent) indicated that they had used audio recordings, 21 (11 percent) knew how to use the resource, and 11 (6 percent) had not used the resource.

A total of 150 respondents (78 percent) had used transparencies, 30 (16 percent) knew how to use transparencies, and 13 (7 percent) had not used the resource.

Of the respondents, 149 (78 percent) had used posters, 29 (15 percent) knew how to use the resource, and 15 (8 percent) had not used the resource.

A total of 150 respondents (78 percent) had used pictures, 29 (15 percent) knew how to use the resource, and 14 (7 percent) had not used pictures.

The respondents indicated that 132 (68 percent) of them had used photographs, 43 (22 percent) knew how to use the resource, and 18 (9 percent) had not used the resource.

A total of 129 respondents (63 percent) had used transparent overlays, 49 respondents (25 percent) knew how to use the resource, and 23 (12 percent) had not used it.

The respondents indicated that 104 (54 percent) of them had used video tapes, 49 (25 percent) knew how to use the resource, and 40 (21 percent) had not used the resource.

Ninety respondents (47 percent) had used paintings, 67 (35 percent) knew how to use them, and 36 (19 percent) had not used the resource.

Eighty of the respondents (42 percent) had used collages, 56 (29 percent) knew how to use them, and 57 (30 percent) had not used the resource.

Eighteen respondents (9 percent) had used computer programs, 9 (5 percent) knew how to use the resource, and 166 (86 percent) had not used the resource.

Eight respondents (4 percent) had used video disks, 24 (12 percent) knew how to use them, and 161 (83 percent) had not used the resource.

Overall, Navy chaplains ranged between knowing how to use and having used various audiovisual resources. Chaplains perceived themselves to be very competent in using audiovisual software resources. Table 6 details chaplains' competency in using various audiovisual software resources. Chaplains reported themselves to have the greatest competency using films and the least competency using video disks.

Chaplains then indicated their competency using audiovisual hardware.

Of the respondents, 174 (90 percent) had used the

Table 6

Chaplains' Competency in Using Audiovisual
Resources (Software): Frequency, Per-
centage, Mean and Standard Deviation
by Resource (N = 193)

Resource item	Have not used		Know how to use		Have used		Mean ^a	S.D.
	f	%	f	%	f	%		
Films	4	2	11	6	178	92	1.90	.361
Filmstrips	4	2	13	7	176	91	1.89	.372
Slides	2	1	19	10	172	89	1.88	.354
Audio recordings	11	6	21	11	161	83	1.77	.535
Transparencies	13	7	30	16	150	78	1.71	.584
Posters	15	8	29	15	149	78	1.70	.628
Pictures	14	7	29	15	150	78	1.70	.594
Photographs	18	9	43	22	132	68	1.59	.654
Transparent overlays	23	12	49	25	121	63	1.51	.699
Video tapes	40	21	49	25	104	54	1.33	.797
Paintings	36	19	67	35	90	47	1.27	.758
Collages	57	30	56	29	80	42	1.12	.857
Computer programs	166	86	9	5	18	9	.233	.604
Video disks	161	83	24	12	8	4	.207	.497

^aGrand mean = 1.42.

slide projector, 14 (7 percent) knew how to use it, and 5 (3 percent) had not used the resource.

The respondents indicated that 173 (90 percent) of them had used the filmstrip projector, 16 (8 percent) knew how to use the resource, and 4 (2 percent) had not used it.

A total of 171 respondents (89 percent) had used the 16mm projector, 11 (6 percent) knew how, and 11 (6 percent) had not used it.

A total of 166 respondents (86 percent) had used the audio recorder, 17 (9 percent) knew how to use the resource, and 10 (5 percent) had not used the resource.

Of the respondents, 145 (75 percent) had used the overhead projector, 32 (17 percent) knew know, and 16 (8 percent) had not used the resource.

A total of 147 respondents had used the camera, 25 (13 percent) knew how, and 21 (11 percent) had not used the resource.

The respondents indicated that 111 (58 percent) of them had used the video recorder/player, 36 (19 percent) knew how, and 46 (24 percent) had not used the resource.

A total of 106 respondents (55 percent) had used the opaque projector, 41 (21 percent) knew how, and 46 (24 percent) had not used the resource.

Of the respondents, 105 (54 percent) had used the video camera, 38 (20 percent) knew how, and 50 (26 percent) had not used the resource.

Thirty-three respondents (17 percent) had used

the dissolver, 21 (11 percent) knew how to use it, and 139 (72 percent) had not used the resource.

Twelve respondents (6 percent) had used the video disk player, 28 knew how, and 153 had not used the resource.

Twenty respondents (11 percent) had used the computer, 12 (6 percent) indicated that they knew how, and 161 (83 percent) had not used the resource.

Overall, Navy chaplains reported themselves to be very competent in using audiovisual hardware. Table 7 shows in detail chaplains' competency in using various audiovisual hardware. Chaplains, as a group, reported themselves to be more competent with the slide projector than with any other resource. The following is the order of their competency with the various audiovisual hardware: (1) slide projector, (2) filmstrip projector, (3) 16mm projector, (4) audio recorder, (5) overhead projector, (6) camera, (7) video recorder/player, (8) opaque projector, (9) video camera, (10) dissolver, (11) video disk player, and (12) computer.

Objective 5

The fifth objective was to determine the importance of various audiovisual resources to Navy chaplains.

In item 3 of the questionnaire chaplains were asked to list the audiovisual resources they would like to use in their ministries. In item 4 of the questionnaire chaplains were asked to rank the three most important

Table 7

Chaplains' Competency in Using Audiovisual
Resources (Hardware): Frequency, Per-
centage, Mean and Standard Deviation
by Resource (N = 193)

Resource item	Have not used		Know how to use		Have used		Mean ^a	S.D.
	f	%	f	%	f	%		
Slide projector	5	3	14	7	174	90	1.88	.401
Filmstrip projector	4	2	16	8	173	90	1.88	.388
16mm projector	11	6	11	6	171	89	1.83	.506
Audio recorder	10	5	17	9	166	86	1.81	.509
Overhead projector	16	8	32	17	145	75	1.67	.622
Camera	21	11	25	13	147	76	1.65	.667
Video recorder	46	24	36	19	111	58	1.34	.837
Opaque projector	46	24	41	21	106	55	1.31	.831
Video camera	50	26	38	20	105	54	1.28	.850
Dissolver	139	72	21	11	33	17	.450	.768
Video disk player	153	79	28	16	12	6	.279	.615
Computer	161	83	12	6	20	11	.279	.678

^aGrand mean = 1.31.

audiovisual resources.

There were 193 respondents who listed at least 5 resource items each in item 3. A total of 965 resource items were listed. Seventy-two (7 percent) of the spaces were left blank. A total of 893 items were listed.

Films were selected 136 times or 15 percent of the time. Filmstrips were selected 92 (10 percent) times. The 16mm projector appeared 87 (9 percent) times. Slides were listed 69 (7 percent) times. Transparencies were selected 61 (6 percent) times. Video tapes appeared 58 (6 percent) times. Audio recordings were listed 56 (6 percent) times. The overhead projector was selected 47 (5 percent) times. The filmstrip projector appeared 46 (5 percent) times. The video recorder/player appeared 30 (3 percent) times. The tape recorder was listed 27 (3 percent) times. Overlays appeared 26 (3 percent) times. Posters appeared 25 (3 percent) times. The slide projector was listed 23 (2 percent) times. Eight millimeter films and video cameras appeared 16 times and 13 times, respectively, each 1 percent of the time. Computer programs appeared 1 percent of the time. The video disk player and collages each appeared 10 (1 percent) times. Video disks appeared nine (1 percent) times. The 8mm projector was listed eight (1 percent) times. Pictures appeared six (1 percent) times, and paintings appeared five (1 percent) times.

Table 8 shows in detail the audiovisual resource

Table 8

Items Chaplains Would Like to Use in Their
Ministries: Frequency and Percentage
by Resource (N = 193)^a

Resource item	f	%
Film	136	15
Filmstrip	92	10
16mm projector	87	9
Slides	69	7
Transparencies	61	6
Video tapes	58	6
Audio recordings	56	6
Overhead projector	47	5
Filmstrip projector	46	5
Video recorder/player	30	3
Tape recorder	27	3
Overlays	26	3
Posters	25	3
Slide projector	23	2
8mm film	16	1
Video camera	13	1
Computer program	12	1
Computer	11	1
Video disk player	10	1
Collages	10	1
Photographs	10	1
Video disks	9	1
8mm projector	8	1
Pictures	6	1
Paintings	5	1
Total	893	

^aNote: 72 (7 percent) of the 965 spaces were left blank; blanks = 0.

items chaplains would like to use in their ministries. The items listed were ranked according to frequency in the item analysis. Chaplains would like to use films most and paintings least.

In ranking audiovisual resources in order of importance, the respondents' first rank had the following distribution: 16mm film, 63 (33 percent) times; video tapes, 20 (10 percent) times; filmstrips, 18 (9 percent) times; 16mm projector, 17 (9 percent) times; video recorder/player, 14 (7 percent) times; slides, 11 (6 percent) times; overhead projector, 7 (4 percent) times; audio recordings, 7 (4 percent) times; tape recorder, 8 (4 percent) times; transparencies, 5 (3 percent) times, computers, 5 (3 percent) times, video disks, 3 (2 percent) times, computer programs, 2 (1 percent) times, overlays and video camera, each 1 (1 percent) time.

The second most important audiovisual resources were ranked: 16mm film, 26 (13 percent) times; slides, 24 (12 percent) times; filmstrips, 18 (9 percent) times; video tapes, 18 (9 percent) times; audio recordings, 18 (9 percent) times; audio recordings, 16 (8 percent) times; transparencies, 11 (6 percent) times; 16mm projector, 10 (5 percent) times; tape recorder, 10 (5 percent) times, filmstrip projector, 8 (4 percent) times; overhead projector, 8 (4 percent) times; computer programs, 5 (3 percent) times; slide projector, 6 (3 percent) times; video recorder/player, 6 (3 percent) times; posters,

3 (2 percent) times; video camera, 4 (2 percent) times, video disks, 4 (2 percent) times; computers, 2 (1 percent) times; pictures, 2 (1 percent) times; 8mm film, 2 (1 percent) times; and opaque projector and collages each 1 (1 percent) time.

The third most important audiovisual resources were ranked: slides, 28 (15 percent) times; audio recordings, 22 (11 percent) times; video tapes, 15 (8 percent) times; filmstrips, 13 (7 percent) times; 16mm film, 14 (7 percent) times; 16mm projector, 11 (6 percent) times; transparencies, 10 (5 percent) times; overhead projector, 9 (5 percent) times; posters, 8 (4 percent) times; tape recorder, 8 (4 percent) times; overlays, 6 (3 percent) times; video camera, 5 (3 percent) times; slide projector, 6 (3 percent) times; 8mm film, 4 (2 percent) times; opaque projector, 3 (2 percent) times; video recorder/player, 3 (2 percent) times; video disks, 3 (2 percent) times; computers, 3 (2 percent) times; filmstrip projector, 2 (1 percent) times; collages, 2 (1 percent) times; dissolver, 2 (1 percent) times; 8mm projector, 1 (1 percent) time; pictures, 1 (1 percent) time; photographs, 1 (1 percent) time; and computer programs, 1 (1 percent) time.

There were 193 respondents who each ranked 3 audiovisual resources for a total of 579 entries. An item analysis of the three ranks overall revealed the following rankings: 16mm film, 103 (18 percent) times;

slides, 63 (11 percent) times; video tapes, 53 (9 percent) times; filmstrips, 49 (8 percent) times; audio recordings, 45 (8 percent) times; 16mm projector, 38 (7 percent) times; tape recorder, 26 (4 percent) times; transparencies, 26 (4 percent) times; overhead projector, 24 (4 percent) times; video recorder/player, 23 (4 percent) times; film-strip projector, 14 (2 percent) times; slide projector, 12 (2 percent) times; posters, 11 (2 percent) times; video camera, 10 (1 percent) times; video disks, 10 (1 percent) times; computer, 10 (1 percent) times; computer programs, 8 (1 percent) times; overlays, 7 (1 percent) times; 8mm film, 6 (1 percent) times; opaque projector, 4 (1 percent) times; pictures, 3 (1 percent) times; collages, 3 (1 percent) times; dissolver, 2 (1 percent) times; video disk player, 2 (1 percent) times; photographs, 1 (1 percent) time; and 8mm projector, 1 (1 percent) time.

Table 9 shows in detail the audiovisual resources in order of importance to chaplains. Sixteen millimeter films were most important, while the 8mm projector was least important. Overall rankings are shown in Table 10.

The ranks of audiovisual resources chaplains would like to use (Table 8) were correlated with audiovisual resources ranked in order of importance (Table 9) for significance. In general, it was found that audiovisual resources that ranked high on one table ranked high on the other. There was significant correlation of the resources chaplains would like to use with the audiovisual

Table 9

Audiovisual Resources in Order of Importance
to Chaplains, by Rank: Frequency and
Percentage by Resource Item

Resource item	Rank 1		Rank 2		Rank 3	
	f	%	f	%	f	%
Filmstrips	18	9	18	9	13	7
Filmstrip projector	4	2	8	4	2	1
16mm film projector	17	9	10	5	11	6
16mm film	63	33	26	13	14	7
8mm film	0	0	2	1	4	2
8mm film projector	0	0	0	0	1	1
Transparencies	5	3	11	6	10	5
Overlays	1	1	0	0	6	3
Overhead projector	7	4	8	4	9	5
Opaque projector	0	0	1	1	3	2
Collages	0	0	1	1	2	1
Posters	0	0	3	2	8	4
Audio recordings	7	4	16	8	22	11
Tape recorder	8	4	10	5	8	4
Video tapes	20	10	18	9	15	8
Video recorder/player	14	7	6	3	3	2
Paintings	0	0	0	0	0	0
Pictures	0	0	2	1	1	1
Video camera	1	1	4	2	5	3
Slides	11	6	24	12	28	15
Slide projector	0	0	6	3	6	3
Dissolver	0	0	0	0	2	1
Photographs	0	0	0	0	1	1
Video disk player	0	0	0	0	2	1
Video disks	3	2	4	2	3	2
Computer programs	2	1	5	3	1	1
Computers	5	3	2	1	3	2
Blank spaces = 0	7	3	8	4	10	5
Total	193	100	193	100	193	100

Table 10

Audiovisual Resources in Overall Order of
Importance to Chaplains: Frequency and
Percentage by Resource Item

Resource item	f	%
16mm film	103	18
Slides	63	11
Video tapes	53	9
Filmstrips	49	8
Audio recordings	45	8
16mm projector	38	7
Tape recorder	26	4
Transparencies	26	4
Overhead projector	24	4
Video recorder/player	23	4
Filmstrip projector	14	2
Slide projector	12	2
Posters	11	2
Video camera	10	1
Video disks	10	1
Computer	10	1
Computer programs	8	1
Overlays	7	1
8mm film	6	1
Opaque projector	4	1
Pictures	3	1
Collages	3	1
Dissolver	2	1
Video disk player	2	1
Photographs	1	1
8mm film projector	1	1
Blank spaces = 0	25	4
Total	579	100

resources ranked in order of importance ($\rho = .906$, $p < .001$). The rankings of both Tables 8 and 9 show the importance of various audiovisual resources to Navy chaplains.

Objective 6

The sixth objective was to determine Navy chaplains' perceived needs for training in using various audiovisual resources.

Item 7 of the questionnaire asked each respondent to indicate whether a lot of training, some training, a little training, or no training was needed in the various audiovisual resources. A total of 193 chaplains responded.

Of the respondents, 121 (63 percent) needed a lot of training in using the computer, 35 (18 percent) needed some training, 12 (6 percent) needed a little training, and 25 (13 percent) needed no training.

Forty-six of the respondents (24 percent) needed a lot of training in using a dissolver, 70 (36 percent) needed some training, 47 (24 percent) needed a little training, and 30 (16 percent) needed no training.

Thirty-eight respondents (20 percent) needed a lot of training in using the video disk player, 81 (42 percent) needed some training, 44 (23 percent) needed a little training, and 30 (16 percent) needed no training.

Twenty-four respondents (12 percent) needed a lot of training with the video camera, 65 (34 percent) needed

some training, 62 (32 percent) indicated that they needed a little training, and 42 (22 percent) indicated they needed no training.

Eighteen of the respondents (9 percent) indicated they needed a lot of training in using the video recorder, 63 (33 percent) needed some training, 57 (30 percent) needed a little training, and 55 (28 percent) needed no training.

Twenty-three respondents (12 percent) indicated a need for a lot of training in using a camera, 40 (21 percent) needed some training, 42 (22 percent) needed a little training, and 88 (46 percent) needed no training.

Sixteen respondents (8 percent) indicated they needed a lot of training in using the opaque projector, 20 (10 percent) needed some training, 63 (33 percent) needed a little training, and 94 (49 percent) needed no training.

Fourteen of the respondents (7 percent) indicated a need for a lot of training in using the overhead projector, 17 (9 percent) needed some training, 52 (27 percent) needed a little training, and 110 (57 percent) needed no training.

The respondents indicated that 18 (9 percent) of them needed a lot of training in using the audio recorder, 19 (10 percent) needed some training, 35 (18 percent) needed a little training, and 121 (63 percent) needed no training.

Sixteen of the respondents (8 percent) indicated a need for a lot of training in using the 16mm projector, 10 (5 percent) needed some training, 38 (20 percent) needed a little training, and 129 (67 percent) needed no training.

Fifteen respondents (8 percent) needed a lot of training in using the slide projector, 11 (6 percent) needed some training, 26 (13 percent) needed a little training, and 141 (73 percent) needed no training.

The respondents indicated that 15 (8 percent) of them needed a lot of training in using the filmstrip projector, 11 (6 percent) needed some training, 21 (11 percent) needed a little training, and 146 (76 percent) needed no training using this resource.

Table 11 shows the responses to chaplains' need for training in using various audiovisual resources. Overall, chaplains reported needing a little training in using audiovisual resources. Chaplains reported needing no training in those resources which were very familiar. It was reported that a lot of training was needed in the resources in which they had less familiarity.

Additional Findings

The following findings resulted from analyzing the open-ended question (item 8) of the questionnaire and by correlating the scores of items 1 through 7 of the questionnaire.

Table 11

Chaplains' Need for Training: Frequency,
Percentage, Mean, and Standard
Deviation by Resource
(N = 193)

Resource item	A lot of train- ing		Some train- ing		A little train- ing		No train- ing		Mean ^a	S.D.
	f	%	f	%	f	%	f	%		
Computer	121	63	35	18	12	6	25	13	2.31	1.06
Dissolver	46	24	70	36	47	24	30	16	1.68	1.00
Video disk player	38	20	81	42	44	23	30	16	1.66	.964
Video camera	24	12	65	34	62	32	42	22	1.37	.957
Video recorder	18	9	63	33	57	30	55	28	1.23	.966
Camera	23	12	40	21	42	22	88	46	.989	1.07
Opaque projector	16	8	20	10	63	33	94	49	.782	.935
Overhead projector	14	7	17	9	52	27	110	57	.663	.914
Audio recorder	18	9	19	10	35	18	121	63	.658	.991
16mm projector	16	8	10	5	38	20	129	67	.549	.921
Slide projector	15	8	11	6	26	13	141	73	.482	.911
Filmstrip projector	15	8	11	6	21	11	146	76	.456	.910

^aGrand mean = 1.07.

Suggestions to Enhance
Utilization of Audiovisual
Resources

Item 8 of the questionnaire asked respondents to list any suggestions that would enhance the utilization of audiovisual resources in their ministries. Fifty-one chaplains responded to the item. The responses were grouped in five general categories, namely: software/programs, computers, training, hardware/equipment, and religious program specialists. The responses are shown in Table 12.

Table 12

Suggestions to Enhance Utilization of
Audiovisual Resources: Frequency
and Percentage by Category
(N = 51)

Category	f	%
Software	22	43
Computers	4	8
Training	15	29
Equipment	8	16
Religious program specialist	2	4

Software. Twenty-two (43 percent) of the responses were in this category. Within this category the respondents were generally requesting the availability of a wider selection of materials and regular updating of a resource catalogue. Some of the materials requested were: music

tapes; more dramatized scripture films; video tapes of dramatized scriptures; more current films and 35mm slides; video tapes and films on biblical, ethical psychological/pastoral care topics and themes; and software materials for overhead projectors. Sixteen of the respondents in this group (73 percent) recommended the distribution and frequent updating of a good catalogue of available resources, and the procurement of current resources. It was also suggested that the Army, Navy and Air Force pool their resources and combine training efforts.

Computers. Four (8 percent) of the responses were in this category. The respondents who listed computers requested literature and information, training in computer programming and information on creative and innovative use of computers in religious programs. This category was separate because respondents sought hardware and software training and software resources.

Training. Fifteen (29 percent) of the responses were in this category. The respondents in this category generally desired training on the different audiovisual resources and equipment and creative ways to use the audiovisual products in ministry. Many felt the training should consist of quarterly one-day workshops. Each workshop would feature a different topic, such as creative uses of a specific resource and how to put it all together.

Hardware. Eight (16 percent) of the responses were in this category. The responses in this category ranged from needing money to purchase equipment to the availability of a nearby resource center from which equipment could be borrowed. The respondents generally listed specific equipment desired, such as: video recorder/player, rear view screen television, and portable video equipment.

Religious program specialist. Two chaplains (4 percent) suggested providing training for religious program specialists in the use of audiovisual equipment. They recommended competence in using audiovisual equipment as part of the religious program specialist job description.

Correlations with Chaplains'
Knowledge of Audiovisual
Resources

Statistically significant correlations were found when the total score of chaplains' knowledge of audiovisual resources was correlated with: (1) score of chaplains' knowledge of resources available through Naval Education and Training Support Centers (NETSC) (.279), (2) score of chaplains' competency in planning the use of audiovisual resources (.357), (3) score of chaplains' competency in using audiovisual resources (.486), and (4) score of chaplains' need for training (-.248) (Table 13).

Table 13
Correlations with Total Score of Chaplains'
Knowledge of Audiovisual
Resources (N = 193)

Total score		Correlated with		r
Category	\bar{X}	Category	\bar{X}	
Chaplains' knowledge of audiovisual resources	56.99	Chaplains' knowledge of resources at NETSC	8.54	.279 ^a
		Competency in planning use of resources	17.33	.357 ^a
		Competency in using audiovisual resources	35.44	.486 ^a
		Need for training in using audiovisual resources	12.78	-.248 ^a

^a_p < .001.

Correlations with Competency
in Planning the Use of
Audiovisual Resources

Statistically significant correlations were found when the total score of chaplains' competency in planning the use of audiovisual resources was correlated with:

(1) chaplains' competency in using audiovisual resources (.749), and (2) chaplains' need for training in using various audiovisual resources (-.357) (Table 14).

Table 14

Correlations with Competency in Planning
 Use of Audiovisual Resources (N = 193)

Total score		Correlated with		r
Category	\bar{X}	Category	\bar{X}	
Chaplains' competency in planning use	17.326	Competency in using audiovisual resources	35.435	.749 ^a
		Chaplains' need for training	12.777	-.357 ^a

^ap < .001.

Correlations with Competency
in Using Audiovisual
Resources

When the total score of chaplains' competency in using audiovisual resources was correlated with the total score of chaplains' need for training, a statistically significant correlation resulted (-.379) (Table 15).

Table 15

Correlations with Competency in Using
Audiovisual Resources (N = 193)

Total score		Correlated with		r
Category	\bar{X}	Category	\bar{X}	
Competency in using audio-visual resources	35.435	Chaplains' need for training	12.777	-.379 ^a

^a $p < .001$.

Correlations of Competency in
Using Resources with Need
for Training in Resource

The total scores of respondents on their competency in using an audiovisual resource were correlated with the total scores of respondents on need for training in using that resource. Twelve statistically significant correlations were found. Table 16 presents the correlation data. Computer was significant at $-.1484$, video disk player was significant at $-.1621$, slide projector was significant at $-.0629$, video tape recorder was significant at $-.4285$, video camera was significant at $-.3518$, audio recorder was significant at $-.2844$, filmstrip projector was significant at $-.1917$, 16mm projector was significant at $-.1766$, the dissolver was significant at $-.4547$, overhead projector was significant at $-.2419$, opaque projector was significant at $-.3395$, and camera was significant at $-.3546$.

Table 16

Correlation of Chaplains' Competency in Using
Resource with Need for Training in
Resource (N = 193)

Resource item	Mean		r
	Competency	Training need	
Computer	.279	2.300	-.1484 ^a
Video disk player	.279	1.658	-.1621 ^a
Slide projector	1.875	.481	-.0629 ^a
Video tape recorder	1.336	1.227	-.4285 ^b
Video camera	1.284	1.367	-.3518 ^b
Audio recorder	1.808	.658	-.2844 ^b
Filmstrip projector	1.875	.455	-.1917 ^c
16mm projector	1.829	.549	-.1766 ^d
Dissolver	.450	1.683	-.4547 ^b
Overhead projector	1.668	.663	-.2419 ^b
Opaque projector	1.310	.782	-.3395 ^b
Camera	1.652	.989	-.3546 ^b

^a_p < .05.

^b_p < .001.

^c_p < .01.

^d_p < .02.

Summary

Navy chaplains were very knowledgeable of audio-visual resources. Most of the chaplains had at least a little knowledge of most of the resources. There were only a few resources that most chaplains did not know about, such as: computers, computer programs, and dissolvers.

Navy chaplains' knowledge of audiovisual resources was verified when the score of their knowledge was correlated with: (1) knowledge of resources available through the Naval Education and Training Support Centers ($r = .279$), (2) competency in planning the use of resources ($r = .357$), (3) competency in using resources ($r = .486$), and (4) the need for training ($r = .248$). When Navy chaplains' knowledge of resources was high, their knowledge of resources available was high, their competency in planning the use was high, their competency in using audiovisual resources was high, and their need for training was low. All of these correlations were significant at the $p < .001$ level.

Second, chaplains were very knowledgeable of audiovisual resources available through the Naval Education and Training Support Centers. The more chaplains knew about the resource, the more they knew about its availability ($r = 2.79$).

Most chaplains were competent in planning the use

of audiovisual resources. Only those resources in which they had little or no knowledge did they not know how to plan the use of. This conclusion was verified in the correlation of knowledge and competency in planning ($r = .357$). Seventy-seven percent of the chaplains have planned or know how to plan the use of most audiovisual software. Sixty-seven percent and 84 percent of the chaplains indicated that they did not know how to plan the use of the video disk and computer programs, respectively (Table 5).

The correlation of chaplains' competency in planning the use of audiovisual resources and chaplains' competency in using audiovisual resources showed that when chaplains rank high in competency in planning the use they would also rank high in competency in using ($r = .749$). Chaplains are very competent in using audiovisual resources. Computer programs and video disks are the two audiovisual resources that most chaplains feel incompetent in using. Eighty-six percent and 83 percent of the chaplains have not used computer programs and video disks, respectively.

The significant positive correlation of the ranked audiovisual resource items chaplains would like to use with the ranks of audiovisual resources in order of importance to chaplains show and confirm the importance of various audiovisual resources to chaplains.

Chaplains' need for training correlated significantly with chaplains' knowledge of resources ($r = .248$)

and competency in planning ($r = .357$) and using various audiovisual resources ($r = .379$). Those resources that most chaplains indicated they needed a lot of training in were the same resources that most chaplains had little or no knowledge of and no competency in planning or using. Table 11 presents a good picture of chaplains' need for training.

Chapter 5

CONCLUSIONS, DISCUSSION AND IMPLICATIONS

The U.S. Navy seeks to support Navy chaplains' ministries to Naval personnel and their families by providing adequate resources. In order to provide adequate audiovisual resource support, the Navy needs to know what resources chaplains want, which resources chaplains have competence in planning the use of and in using, which resources chaplains consider important in their ministries, and what specialized training is needed to use the various audiovisual resources. The purpose of the study was to determine Navy chaplains' utilization of audiovisual resources in the religious programs of the Navy.

A descriptive survey approach, utilizing a researcher-designed questionnaire, was used to gather data pertinent to determining U.S. Navy chaplains' utilization of audiovisual resources in religious programs. The survey instrument assessed chaplains' knowledge of audiovisual resources, the availability of audiovisual resources, chaplains' competence in planning and using audiovisual resources, the importance of audiovisual resources to chaplains, and chaplains' need for training in using the various resources. The instrument was mailed to 321

randomly selected subjects. A total of 193 responded by the cutoff date.

It was found that Navy chaplains want a wider selection of audiovisual resources, such as: music tapes, dramatized scripture video tapes and films, and video tapes and films on biblical, ethical, and psychological/pastoral care topics and themes. In general, chaplains were very competent in planning and using the various audiovisual resources. It was found that chaplains considered 16mm films, 35mm slides, video tapes, filmstrips, and audio tapes as most important in their ministries. Chaplains indicated that they needed no training in using audiovisual resources. It was also found that Navy chaplains were very knowledgeable of the various audiovisual resources and their availability through the Naval Education and Training Support Centers.

Conclusions

From the literature it was concluded that the utilization of audiovisual resources requires a working knowledge of hardware and knowledge of the content of software. The data indicated that Navy chaplains perceive themselves to be very knowledgeable of audiovisual resources. Chaplains perceive themselves to be very competent in planning the use of audiovisual resources. Chaplains also perceive themselves to be very competent in using audiovisual hardware and software.

It was concluded from the literature that those who are trained in the uses of audiovisual resources are more likely to use them than their untrained colleagues. The data indicated that Navy chaplains perceive themselves as needing no training in using audiovisual resources. Also, Navy chaplains perceive themselves to be competent in using audiovisual resources.

From the literature it was also concluded that audiovisual resources can be used effectively in all areas of church life, namely: worship, evangelism, and education. The data indicated that Navy chaplains perceive themselves as wanting more creative and innovative ways to use audiovisual resources in their ministries.

As a result of the study it was concluded that:

1. Navy chaplains perceive themselves to be knowledgeable and competent enough to utilize any audiovisual resource in religious programs.

2. Navy chaplains perceive themselves to be adequately trained in the uses of audiovisual resources and are very likely to use them in religious programs.

3. Navy chaplains would effectively utilize audiovisual resources in all areas of church life as knowledge of audiovisual resource uses increased.

4. Senior officers of the Chaplain Corps are more responsive to administrative matters than junior officers of the Chaplain Corps.

5. Navy chaplains reported themselves to prefer

using 16mm films, 35mm slides, video tapes, filmstrips, and audio recordings in their ministries.

6. Navy chaplains perceive themselves to be very knowledgeable of the availability of various audiovisual software through the Naval Education and Training Support Centers.

7. Navy chaplains reported themselves as wanting a wider selection of audiovisual resources, such as: music tapes, video tapes and films of dramatized scripture, and video tapes and films on biblical, ethical, and psychological/pastoral care topics and themes.

Discussion

In general, all Navy chaplains have completed at least three years of graduate or professional education beyond the bachelor's degree prior to commissioning as Naval officers in the Chaplain Corps. Chaplains have had a lengthy exposure to the uses of audiovisual resources in their preparation for the ministry. Training in the uses of audiovisual resources is sometimes included in their course of study. In addition, all chaplains receive 23 hours of instruction and practical experience in using audiovisual resources during the basic course at Chaplains School. The lengthy exposure to the uses of audiovisual resources and the instruction received during indoctrination contribute significantly to chaplains' knowledge and competence in using various audiovisual resources.

Navy chaplains perceived themselves to be adequately trained in the uses of audiovisual resources. All Navy chaplains have had some experience with most audiovisual resources. The experience is gained especially in the church's educational program. From the study it was learned that churches have been utilizing audiovisual resources since the invention and development of the resources. Navy chaplains come from and represent these churches in the military. Their training and experience have included uses of audiovisual resources. Navy chaplains are experienced at operating the equipment. The operation of equipment, however, is limited training.

The study was weak in researching how trained chaplains were. Chaplains perceive themselves to be competent and adequately trained in the uses of audiovisual resources. The study did not adequately define competence or training. The terms could be understood to mean competence or skill enough to operate equipment. Competence and adequate training should mean more than operation. Both should include using educational theory and teaching methodology in the development of audiovisual software for use in the religious programs of the Navy.

Navy chaplains are seeking more ways to utilize audiovisual resources in all areas of their ministry. Chaplains want to be effective and creative in their ministries to Naval personnel. The study indicated that chaplains wanted more workshops on how to creatively

utilize the various audiovisual resources in religious programs. As chaplains acquire more knowledge of the uses, they will utilize more audiovisual resources in religious programs.

The study indicated that the more senior officers of the Chaplain Corps were more responsive to the questionnaire than junior officers. The highest ranks of the officers returned the highest percentage of the questionnaires. As the ranks descended, the percentage of returned questionnaires also descended. It could be argued that the more senior officers of the Chaplain Corps are in more supervisory and administrative positions which afford them the time to respond to paperwork. The researcher is of the opinion that all chaplains have the time to meet administrative requirements. The more senior chaplains have become more efficient at budgeting their time and handling paperwork. Each piece of paper is probably handled just once.

Navy chaplains reported that they prefer using 16mm films, 35mm slides, video tapes, filmstrips, and audio recordings in their ministries. The study indicated that chaplains prefer 16mm films about two to one over any other resource.

The Navy maintains extensive film libraries at the two training support centers. Navy chaplains are very knowledgeable of these resources and make use of films quite extensively in religious programs. Films are also

easier to use because they require less production knowledge and skill than other resources. Films deal with a particular theme, and chaplains do not have to design and produce the message. Chaplains can develop their use of the film around its theme or content.

Second, chaplains prefer films because film projectors are readily available. All ships and stations in the Navy will have several film projectors for use. Navy chaplains can develop programs around the utilization of films without logistical or fiscal constraints.

Navy chaplains prefer films, slides, video tapes, filmstrips, and audio recordings because the resources are available, compact, and easy to produce. Chaplains have many "shutterbugs" within their commands who are eager to take slides and pictures for use in religious programs. Others eagerly contribute recordings or tapes to make sound tracks. Navy chaplains can produce these audiovisual resources by utilizing the human resources of the command.

Navy chaplains reported wanting a wider selection of audiovisual resources, such as: music tapes; video tapes and films of dramatized scriptures; and video tapes and films on biblical, ethical, and psychological/pastoral care topics and themes. The software listed can be used by any chaplain because of the availability of the hardware. Chaplains have made use of these preferred resources. They want to enhance their ministries with greater variety. Films, video tapes, and music (audio) tapes have been

very effective in their ministries.

Chaplains' backgrounds, including the lengthy period of preparation for the vocation, the required pastoral experience, the practical experience with audiovisual resources during chaplains' basic course, and the availability of audiovisual resources have contributed significantly to chaplains' perceptions that they are knowledgeable and competent in utilizing audiovisual resources. The study was weak in defining how chaplains utilized and developed resources.

Implications

Since Navy chaplains perceive themselves to be very knowledgeable of and competent in using various audiovisual resources and prefer using films, slides, video tapes, filmstrips, and audio tapes, the Navy should direct its attention to providing appropriate audiovisual software, especially 16mm films. An audiovisual resource guide which lists film resources by topic, content, purpose, length of time, and suggested age group or type of audience should be developed and distributed to all Navy chaplains. The audiovisual resource guide should include sections that list the availability and content of other audiovisual software, such as: video tapes, 35mm slide presentations, audio tapes, sound tracks, and filmstrips. The audiovisual resource guide should be updated at least annually.

Since Navy chaplains want scriptural/biblical dramatizations on films, video tapes, slides, and audio tapes, and video tapes and films on biblical, ethical, and psychological/pastoral care topics and themes, the Navy should procure adequate copies of current resources on these topics and include them in the audiovisual resource guide for distribution to all chaplains. Adequate copies of each resource will ensure their availability to chaplains without long waiting periods.

Since Navy chaplains perceive themselves to be adequately trained in the use of audiovisual resources currently available, the Navy should maintain its present audiovisual training course included in the basic school. This training should be augmented by audiovisual workshops on new resources as they become available. The training should include how to plan the use of the resource as well as the operation of the equipment.

Since the study did not indicate the level of competence or training in developing audiovisual software, further research should be done before a training program is designed. Chaplains might be producing audiovisual resources and utilizing them according to sound educational theory and models.

Since Navy chaplains are seeking more ways to utilize audiovisual resources in all areas of their ministry, the Navy should develop and disseminate to all chaplains a periodical or "house organ" which shares

innovative ways chaplains are utilizing audiovisual resources and information of new resources. The recently established Chaplains Resource Board has begun to meet this need through the publication of The Porthole. This publication should continue, and more chaplains should be encouraged to submit suggestions, hints, and resources to be shared with all chaplains.

It is recommended that the Navy develop and disseminate to all chaplains an audiovisual resource guide which lists films, video tapes, slides, filmstrips, and audio tapes. It is recommended that each audiovisual resource listed include topic, content, purpose, length of time, and suggested age group or type audience. The audiovisual resource guide should also clarify how and where chaplains can procure the resources. It is further recommended that the audiovisual resource guide is updated annually.

It is recommended that the Navy procure current scriptural/biblical dramatization films, video tapes, and slides for inclusion in the lending libraries of Naval Education and Training Support Centers. It is also recommended that the Navy expand the Naval Education and Training Support Centers' libraries to include films and video tapes on biblical, ethical, and psychological/pastoral care topics and themes. It is further recommended that these resources be included in the audiovisual resource guide as soon as they become available for use. Periodic

addenda announcing acquisitions could be sent to all chaplains.

It is recommended that the Navy maintain its present audiovisual (media) training course for chaplains of the basic course. The course should include some practical experience with the five most preferred audiovisual resources, namely: films, slides, video tapes, filmstrips, and audio tapes.

It is recommended that the Navy conduct audiovisual training workshops on video disks and video disk players and computers and computer programs as these resources become available to chaplains. The workshops should include training on how to plan the use and production of resources and how to operate the hardware.

It is recommended that the Navy continue the periodic publication and dissemination of The Porthole. It is also recommended that all chaplains be encouraged to contribute suggestions, hints, and ideas about the utilization of audiovisual resources in all areas of ministry. The sharing of ideas and resources will enhance the ministries of Navy chaplains.

It is also recommended that further research be conducted to determine Navy chaplains' competence and need for training in designing, planning, producing, and developing audiovisual resources prior to developing more audiovisual training programs.

BIBLIOGRAPHY

BIBLIOGRAPHY

- Bachman, John W. The Church in the World of Radio-Television. New York: Association Press, 1960.
- Biddle, Bruce J., and Peter H. Rossi. "Educational Media, Education, and Society." The New Media and Education, ed. Peter H. Rossi. Garden City, N.Y.: Doubleday, 1967.
- Bowman, Locke E., Jr., et al. Essential Skills for Good Teaching. Scottsdale, Ariz.: National Teacher Education Project, 1974.
- Brown, James W., R. B. Lewis, and F. F. Harclerod. AV Instruction, Technology, Media and Methods. New York: McGraw-Hill, 1977.
- Case, William F. "The Director of Religious Education." Religious Education: A Comprehensive Survey, ed. Marvin J. Taylor. New York: Abingdon Press, 1960.
- Curl, David H. "Audiovisual Media." Materials and Methods in Adult Education, ed. Chester Klevins. New York: Klevins Publications, 1972.
- Dale, Edgar. Audio-visual Methods in Teaching. Rev. ed. New York: The Dryden Press, 1954.
- Ends, A. Walden. "Proficiency Teaching: Communication in Process." Educational Media: Theory into Practice, ed. W. C. Meierhenny and Raymond V. Wiman. Columbus, Ohio: Charles E. Merrill, 1969.
- Field, Elinor S. "The Many Faces of Religious Education." Religious Education, 69 (September-October 1974), 612-20.
- Godfrey, Eleanor P. The State of Audiovisual Technology: 1961-1966. Washington, D.C.: Department of Audio-visual Instruction, National Education Association of the United States, 1967.
- Hinz, Marion Carol. "The Role of Non-projected Audio-visual Materials in the Lutheran Church-Missouri Synod." Master's thesis, San Diego State College, 1960.

- Hinz, Robert Paul. "The Role of Audio-visual Materials in the Lutheran Church-Missouri Synod." Master's thesis, San Diego State College, 1956.
- Hockman, William S. Projected Visual Aids in the Church. Boston: Pilgrim Press, 1947.
- Isaac, Stephen, and William Michael. Handbook in Research and Evaluation. San Diego: Robert R. Knapp, 1974.
- Janes, H. Paul. Screen and Projector in Christian Education. Philadelphia: Westminster Press, 1932.
- Janowitz, Morris, and David Street. "The Social Organization of Education." The New Media and Education, ed. Peter H. Rossi. Garden City, N.Y.: Doubleday, 1967.
- Kanner, J. H. "The Development and Role of Teaching Aids in the Armed Forces." Symposium for New Teaching Aids for the American Classroom. Washington, D.C.: Institute for Communication Research, 1960.
- Levine, Gustav. Introductory Statistics for Psychology: The Logic and the Methods. New York: Academic Press, 1981.
- McKeachie, Wilbert J. "Higher Education." The New Media and Education, ed. Peter H. Rossi. Garden City, N.Y.: Doubleday, 1967.
- Meierhenny, W. C. "A Look Ahead." Educational Media: Theory into Practice, ed. W. C. Meierhenny and Raymond V. Wiman. Columbus, Ohio: Charles E. Merrill, 1969.
- National Council of Churches of Christ in U.S.A. Division of Christian Education, Department of A-V and Radio Education. Audio-visual Resource Guide for Use in Religious Education. New York: National Council of Churches in U.S.A., 1954.
- Oddie, Alan. U.S. Navy Chaplain's Audio-visual Resource Guide Mini Guide to Media. Pittsburgh: Thesis, 1974.
- Oppenheim, A. N. Questionnaire Design and Attitude Measurement. New York: Basic Books, 1966.
- Rawls, Andrew B. "Teaching Baptist History with Audio-visuals." Baptist History and Heritage, 12 (July 1977), 142-51.

- Reynolds, Rex. "Educational Technology." Materials and Methods in Adult Education, ed. Chester Klevins. New York: Klevins Publications, 1972.
- Rogers, W. L., and Paul H. Vieth. Visual Aids in the Church. Philadelphia: Christian Education Press, 1946.
- Rumpf, Oscar J. The Use of Audio-visuals in the Church. Philadelphia: Christian Education Press, 1958.
- Sloyan, Gerard S. Speaking of Religious Education. New York: Herder and Herder, 1968.
- Taylor, Marvin J. "A Historical Introduction to Religious Education." Religious Education: A Comprehensive Survey, ed. Marvin J. Taylor. New York: Abingdon Press, 1960.
- Thornton, Bob. "Communicating History Through Television, Video Tape, and Films." Baptist History and Heritage, 12 (July 1977), 156-65.
- Tiemann, E. J. "A Study of the Programs of Projected Audio-visual Material in Religious and Missionary Education Among Selected Protestant Church Denominations on the National Level." PhD dissertation, Indiana University, 1951.
- Tower, Howard E. Church Use of Audio-visuals. New York: Abingdon Press, 1950.
- _____. Church Use of Audio-visuals. Rev. ed. Nashville: Abingdon Press, 1959.
- _____. "The Use of Audio-visuals in the Church." Religious Education: A Comprehensive Survey, ed. Marvin J. Taylor. New York: Abingdon Press, 1960.
- Tuckman, Bruce W. Conducting Educational Research. 2d ed. New York: Harcourt Brace Jovanovich, 1978.
- U.S. Air Force. United States Air Force Chaplain Corps Film Utilization Guide. Washington, D.C.: U.S. Air Force, 1980.
- U.S. Navy. Catalog of Training Films for the United States Navy, Marine Corps, Coast Guard. NAVAER-TF-22-10. Washington, D.C.: U.S. Navy, 1945.
- _____. Catalog of Training Films for the United States Navy, Marine Corps. NAVAER-00-80-V-69. Washington, D.C.: U.S. Navy, 1946.

U.S. Navy. Catalog of Audiovisual Production Products.
OPNAVINST 3157.1. Washington, D.C.: U.S. Navy,
1980.

Waldrup, Earl. Using Visual Aids in a Church. Nashville:
Broadman Press, 1949.

Webster's New World Dictionary. Springfield, Mass.:
G. and C. Merriam, 1972.

Wiman, Raymond V. "An Historical View of Communication in
the Classroom." Educational Media: Theory into
Practice, ed. W. C. Meierhenny and Raymond V. Wiman.
Columbus, Ohio: Charles E. Merrill, 1969.

Wittich, Walter A., and Charles F. Schuller. Audio-visual
Materials: Their Nature and Use. New York: Harper,
1953.

Wood, Ben D., and Frank N. Freeman. Motion Pictures in
the Classroom. Boston: Houghton Mifflin, 1929.

APPENDICES

Appendix A

REQUEST FOR RESEARCH ON CHAPLAINS'
UTILIZATION OF AUDIOVISUAL
RESOURCES

CHIEF OF NAVAL EDUCATION AND TRAINING
Naval Air Station
Pensacola, Florida 32508

From: Chief of Naval Education and Training

To: Lieutenant Commander George A. Langhorne, CHC, USN
4012 Spearfish Lane
San Diego, CA 92124

Subject: Academic Remedial Training Program

Reference: (a) Your letter GAL:meh of 15 May 1981

1. The request contained in reference (a) has been discussed with Dr. Norman Kerr, Assistant for Research, Experimental Program Development, and Academic Programs, who resides on the staff of the Chief of Naval Technical Training, Memphis, TN. Dr. Kerr indicates that the areas of research in which you desire to engage are currently under study and that your research effort would be a duplication. Accordingly, your request to research this program is not approved.
2. In discussing this matter with Chaplain Riggs at this headquarters, it was learned that an urgent need exists for research in the area of chaplain utilization of audiovisual products. It is therefore recommended that you develop a thesis proposal which would address this topic. Should this be possible, you may consider that approval is hereby granted for contact with the Commanding Officer, Naval Education and Training Support Center, Pacific (NAVEDTRASUPPCENPAC) to obtain technical advice and support for this research effort.
3. By copy of this letter, it is requested that the Commanding Officer, NAVEDTRASUPPCENPAC grant access to Chaplain Langhorne to audiovisual products utilized by chaplains in providing ministry to fleet and shore personnel.

/s/ W. L. Maloy

W. L. Maloy
By direction

Copy to:
SUPT. NAVPGSCOL (Code 031)
CO, NAVEDTRASUPPCENPAC

Appendix B

QUESTIONNAIRE

CHAPLAINS' NEEDS FOR AUDIOVISUAL PRODUCTS
IN RELIGIOUS PROGRAMS

The purpose of this questionnaire is to provide data which will help determine Navy chaplains' need for audiovisual resources.

The information you give will be considered confidential. In no case will information be disclosed that will identify you personally.

1. In the question:

- a = No knowledge (no idea of the resource)
- b = Little knowledge (have heard of resource)
- c = Knowledgeable (understand how to use resource)
- d = Very knowledgeable (have used resource)

Please check appropriate blank next to resource item.

- | | | | | | | | | |
|----------------------------|---|-----|---|-----|---|-----|---|-----|
| 1. Filmstrips | a | ___ | b | ___ | c | ___ | d | ___ |
| 2. Filmstrip projector | a | ___ | b | ___ | c | ___ | d | ___ |
| 3. 16mm film projector | a | ___ | b | ___ | c | ___ | d | ___ |
| 4. 16mm films | a | ___ | b | ___ | c | ___ | d | ___ |
| 5. 8mm films | a | ___ | b | ___ | c | ___ | d | ___ |
| 6. 8mm film projector | a | ___ | b | ___ | c | ___ | d | ___ |
| 7. Transparencies | a | ___ | b | ___ | c | ___ | d | ___ |
| 8. Overlays | a | ___ | b | ___ | c | ___ | d | ___ |
| 9. Overhead projector | a | ___ | b | ___ | c | ___ | d | ___ |
| 10. Opaque projector | a | ___ | b | ___ | c | ___ | d | ___ |
| 11. Collages | a | ___ | b | ___ | c | ___ | d | ___ |
| 12. Posters | a | ___ | b | ___ | c | ___ | d | ___ |
| 13. Audio recordings | a | ___ | b | ___ | c | ___ | d | ___ |
| 14. Tape recorders/players | a | ___ | b | ___ | c | ___ | d | ___ |
| 15. Video tapes | a | ___ | b | ___ | c | ___ | d | ___ |
| 16. Video recorder/player | a | ___ | b | ___ | c | ___ | d | ___ |

17. Paintings	a___	b___	c___	d___
18. Pictures	a___	b___	c___	d___
19. Video camera	a___	b___	c___	d___
20. Slides	a___	b___	c___	d___
21. Slide projector	a___	b___	c___	d___
22. Dissolver	a___	b___	c___	d___
23. Photographs	a___	b___	c___	d___
24. Video disk player	a___	b___	c___	d___
25. Video disk	a___	b___	c___	d___
26. Computer programs	a___	b___	c___	d___
27. Computers	a___	b___	c___	d___
28. _____	a___	b___	c___	d___
29. _____	a___	b___	c___	d___
30. _____	a___	b___	c___	d___

2. The Naval Education and Training Support Centers provide audiovisual products to support the religious program needs of Navy chaplains. Place the appropriate letter in the blank when:
- a = Resource not available
b = Resource in inventory
c = Resource readily available
d = Not known

- | | |
|--------------------------|------------------------------|
| 1. ___ Computer programs | 8. ___ Audio recordings |
| 2. ___ Video disks | 9. ___ Films |
| 3. ___ Photographs | 10. ___ Filmstrips |
| 4. ___ Slides | 11. ___ Transparencies |
| 5. ___ Pictures | 12. ___ Transparent overlays |
| 6. ___ Paintings | 13. ___ Posters |
| 7. ___ Video tapes | 14. ___ Collages |

3. From the list of audiovisual resources given in question 1, select and list the items that you have or would like to use in your ministry.

1. _____	9. _____
2. _____	10. _____
3. _____	11. _____
4. _____	12. _____
5. _____	13. _____
6. _____	14. _____
7. _____	15. _____
8. _____	

4. Rank the top five audiovisual resources listed in question 3 in order of importance to you. Number one (1) is the most important.

1. _____	4. _____
2. _____	5. _____
3. _____	

5. Please complete the following statements by placing the appropriate letter in the blank.

My background and training are such that:

a = I have planned the use of

b = I know how to plan

c = I do not know how to plan the use of

1. ___ Computer programs	8. ___ Audio recordings
2. ___ Video disks	9. ___ Films
3. ___ Photographs	10. ___ Transparencies
4. ___ Slides	11. ___ Transparent overlays
5. ___ Pictures	12. ___ Posters
6. ___ Paintings	13. ___ Collages
7. ___ Video tapes	14. _____

6. Please complete the following statements by placing the appropriate letter in the blank:
 a = I have not used
 b = I know how to use
 c = I have used

Audiovisual Products

- | | |
|--------------------------|------------------------------|
| 1. ___ Computer programs | 8. ___ Audio recordings |
| 2. ___ Video disks | 9. ___ Films |
| 3. ___ Photographs | 10. ___ Filmstrips |
| 4. ___ Slides | 11. ___ Transparencies |
| 5. ___ Pictures | 12. ___ Transparent overlays |
| 6. ___ Paintings | 13. ___ Posters |
| 7. ___ Video tapes | 14. ___ Collages |

Audiovisual Equipment

- | | |
|----------------------------|----------------------------|
| 1. ___ Computers | 8. ___ 16mm film projector |
| 2. ___ Video disk player | 9. ___ Dissolver |
| 3. ___ Slide projector | 10. ___ Overhead projector |
| 4. ___ Video tape recorder | 11. ___ Opaque projector |
| 5. ___ Video camera | 12. ___ Camera |
| 6. ___ Audio tape recorder | 13. ___ _____ |
| 7. ___ Filmstrip projector | 14. ___ _____ |

7. In the list of audiovisual resources given below, please place the appropriate letter next to the resource in which you feel that you need:
 a = A lot of training (a semester-long course; at least 45 hours of instruction)
 b = Some training (a 3-4 day workshop experience)
 c = A little training (a one-day refresher course)
 d = No training

- | | |
|-----------------------------|-----------------------------|
| 1. ___Computers | 7. ___Filmstrip projector |
| 2. ___Video disk player | 8. ___16mm film projector |
| 3. ___Slide projector | 9. ___Dissolver |
| 4. ___Video tape recorder | 10. ___Overhead projector |
| 5. ___Video camera | 11. ___Opaque projector |
| 6. ___Audio tape recorder | 12. ___Camera |
8. Please list any suggestions that will enhance the utilization of audiovisual resources in your ministry.

9. Personal information. Please check blanks that apply.

Duty station:

Rank:

___Navy

___LTJG

___Coast Guard

___LT

___Marine Corps

___CDR

___Ashore

___CAPT

___Afloat

Many thanks for participating in this research project.

Appendix C

LETTER REGARDING SUGGESTIONS FOR STUDY

Deputy, Chaplain Education
and Training Program
Development
Naval Education and Training
Program Development Center
(Code CH)
Pensacola, FL 32509
10 September 1981

LCDR George A. Langhorne, CHC, USN
P. O. Box 24188
San Diego, CA 92124

Dear George:

Your letter and questionnaire contained sufficient information and clearly communicated the purpose of your study. I have some concern about the general scope of the study in view of the project completion date you indicated. You might consider limiting your study to the chaplain's utilization of audiovisual equipment and its relevance to the command religious program, or you might limit the target group to chaplains in the LCDR or below rank structure.

I want to commend you for your courage in taking on such a big project to be completed in such a short period of time. I wish you well in your endeavor and hope to receive a copy of your final report. If I can be of further assistance to you, don't hesitate to call or write.

Sincerely yours,

/s/ Jack

Jack E. Six

Appendix D

COVER LETTER FOR QUESTIONNAIRE

UNITED STATES INTERNATIONAL UNIVERSITY

School of Education
10455 Pomerado Road
San Diego, California 92131
Telephone (714) 271-4300

Dear Chaplain:

The enclosed survey questionnaire is a part of my dissertation research undertaken at the request of CNET during this current year of postgraduate education at United States International University. The survey instrument is designed to provide data which will help determine Navy chaplains' need for and the identification of audio-visual resources. This information can help the Navy better support your need for adequate audiovisual resources in your ministries to Naval personnel and dependents. Your identity is not necessary, and all information will be treated confidentially.

The results of this research project will be available to all chaplains at a later date.

I respectfully request your help and participation in this research project. Please answer all questions on the attached survey instrument and return to me ASAP in the enclosed envelope. As this survey is a random sampling, your participation is very much needed. Thank you very much.

Respectfully yours,

/s/ George A. Langhorne

George A. Langhorne
LCDR, CHC, USN

Thesis
L26347 Langhorne
c.1

199637

Navy chaplains'
utilization of audio-
visual resources in
religious programs.

Thesis
L26347 Langhorne
c.1

199637

Navy chaplains'
utilization of audio-
visual resources in
religious programs.

thesL26347

Navy chaplains' utilization of audiovisu



3 2768 001 02929 1

DUDLEY KNOX LIBRARY